

HETCH HETCHY GRANT TO SAN FRANCISCO.

AUGUST 5, 1913.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed.

Mr. RAKER, from the Committee on the Public Lands, submitted the following

REPORT.

[To accompany H. R. 7207.]

The Committee on the Public Lands has had under consideration bill H. R. 7207, a bill "granting to the city and county of San Francisco certain rights of way in, over, and through certain public lands in the Yosemite National Park and Stanislaus National Forest, and certain lands in the Yosemite National Park, the Stanislaus National Forest, and the public lands in the State of California, and for other purposes." Having had the same under consideration and after full hearing and due consideration thereof, the committee unanimously reports that the bill do pass. The bill as finally passed upon and unanimously approved by the committee is as follows:

[H. R. 7207, Sixty-third Congress, first session.]

A BILL Granting to the city and county of San Francisco certain rights of way in, over, and through certain public lands, the Yosemite National Park, and Stanislaus National Forest, and certain lands in the Yosemite National Park, the Stanislaus National Forest, and the public lands in the State of California, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby granted to the city and county of San Francisco, a municipal corporation in the State of California, all necessary rights of way along such locations and of such width, not to exceed two hundred and fifty feet, as in the judgment of the Secretary of the Interior may be required for the purposes of this act, in, over, and through the public lands of the United States in the counties of Tuolumne, Stanislaus, San Joaquin, and Alameda, in the State of California, and in, over, and through the Yosemite National Park and the Stanislaus National Forest, or portions thereof, lying within the said counties, for the purpose of constructing, operating, and maintaining aqueducts, canals, ditches, pipes, pipe lines, flumes, tunnels, and conduits for conveying water for domestic purposes and uses to the city and county of San Francisco and such other municipalities and water districts as, with the consent of the city and county of San Francisco, or in accordance with the laws of the State of California in force at the time application is made, may hereafter participate in the beneficial use of the rights and privileges granted by this act; for the purpose of constructing, operating, and maintaining power and electric plants, poles, and lines for generation and sale and distribution of electric energy; also for the purpose of constructing, operating, and maintaining telephone and tele-

graph lines, and for the purpose of constructing, operating, and maintaining roads, trails, bridges, tramways, railroads, and other means of locomotion, transportation, and communication, such as may be necessary or proper in the construction, maintenance, and operation of the works constructed by the grantee herein; together with such lands in the Hetch Hetchy Valley, and Lake Eleanor Basin within the Yosemite National Park, and the Cherry Valley within the Stanislaus National Forest, irrespective of the width or extent of said lands, as may be determined by the Secretary of the Interior to be actually necessary for surface or underground reservoirs, diverting and storage dams; together with such lands as the Secretary of the Interior may determine to be actually necessary for power houses, and all other structures or buildings necessary or properly incident to the construction, operation, and maintenance of said water-power and electric plants, telephone and telegraph lines, and such means of locomotion, transportation, and communication as may be established; together with the right to take, free of cost, from the public lands, the Yosemite National Park, and the Stanislaus National Forest adjacent to its right of way, stone, earth, gravel, sand, tufa, and other materials of like character actually necessary to be used in the construction, operation, and repair of its said water-power and electric plants, its said telephone and telegraph lines, and its said means of locomotion, transportation, or communication, under such conditions and regulations as may be fixed by the Secretary of the Interior and the Secretary of Agriculture, within their respective jurisdictions, for the protection of the public lands, the Yosemite National Park, and the Stanislaus National Forest: *Provided*, That said grantee shall file, as hereinafter provided, a map or maps showing the boundaries, location, and extent of said proposed rights of way and lands for the purposes hereinabove set forth: *Provided further*, That the Secretary of the Interior shall approve no location in the national forests unless said location shall have been approved in writing by the Secretary of Agriculture.

Sec. 2. That within three years after the passage of this act said grantee shall file with the registers of the United States land offices, in the districts where said rights of way or lands are located, a map or maps showing the boundaries, locations, and extent of said proposed rights of way and lands required for the purposes stated in section one of this act; but no permanent construction work shall be commenced on said land until such map or maps shall have been filed as herein provided and approved by the Secretary of the Interior: *Provided, however*, That any changes of location of any of said rights of way or lands may be made by said grantee before the final completion of any of said work permitted in section one hereof, by filing such additional map or maps as may be necessary to show such changes of location, said additional map or maps to be filed in the same manner as the original map or maps; but no change of location shall become valid until approved by the Secretary of the Interior or the Secretary of Agriculture, as his jurisdiction may appear; and the approval by the Secretary of the Interior of said map or maps showing changes of location of said rights of way or lands shall operate as an abandonment by the city and county of San Francisco to the extent of such change or changes of any of the rights of way or lands indicated on the original maps: *And provided further*, That any rights inuring to the grantee under this act shall, on the approval of the map or maps referred to herein by the Secretary of the Interior, relate back to the date of the filing of said map or maps with the register of the United States Land Office as provided herein, or to the date of the filing of such maps as they may be copies of as provided for herein: *And provided further*, That with reference to any map or maps heretofore filed by said city and county of San Francisco or its grantor with any officer of the Department of the Interior or the Department of Agriculture, and approved by said department, the provisions hereof will be considered complied with by the filing by said grantee of copies of any of such map or maps with the register of the United States Land Office as provided for herein, which said map or maps and locations shall, as in all other cases, be subject to the approval of the Secretary of the Interior.

Sec. 3. That the rights of way hereby granted shall not be effective over any lands upon which homestead, mining, or other existing valid claim or claims shall have been filed or made and which now in law constitute prior rights to any claim of the grantee until said grantee shall have purchased such portion or portions of such homestead, mining, or other existing valid claims as it may require for right-of-way purposes and other purposes herein set forth, and shall have procured proper relinquishments of such portion or portions of such claims, or acquired title by due process of law and just compensation paid to said entrymen or claimants, and caused proper evidence of such fact to be filed with the Commissioner of the General Land Office, and the right of such entrymen or claimants to sell and of said grantee to purchase such portion or portions of such claims are hereby granted: *Provided, however*, That this act shall not apply to any lands embraced in rights of way heretofore approved under any act

of Congress for the benefit of any parties other than said grantee or its predecessors in interest.

SEC. 4. That the said grantee shall conform to all regulations adopted and prescribed by the Secretary of the Interior governing the Yosemite National Park and by the Secretary of Agriculture governing the Stanislaus National Forest, and shall not take, cut, or destroy any timber within the Yosemite National Park or the Stanislaus National Forest, except such as may be actually necessary in order to construct, repair, and operate its said reservoirs, dams, power plants, water power and electric works, and other structures above mentioned, or is actually necessary in the construction, repair, and operation thereof, but no timber shall be cut or removed from lands outside of the right of way until designated by the Secretary of the Interior or the Secretary of Agriculture, respectively; and it shall pay to the United States the full value of all timber and wood cut, injured, or destroyed on or adjacent to any of the rights of way and lands, as required by the Secretary of the Interior or the Secretary of Agriculture: *Provided*, That no timber shall be cut by the grantee in the Yosemite National Park except from land to be submerged or which constitutes an actual obstruction to the right or rights of way or to any road or trail provided in this act: *Provided further*, That for and in consideration of the rights and privileges hereby granted to it the said grantee shall construct and maintain in good repair such bridges or other practicable crossings over its rights of way within the Stanislaus National Forest as may be prescribed in writing by the Secretary of Agriculture, and elsewhere on public lands along the line of said works, and within the Yosemite National Park, and such as may be prescribed in writing by the Secretary of the Interior; and said grantee shall, as said waterworks are completed, if directed in writing by the Secretary of the Interior or the Secretary of Agriculture, construct and maintain along each side of said right of way a lawful fence of such character as may be prescribed by the proper Secretary, with such suitable lanes or crossings as the aforesaid officers shall prescribe: *And provided further*, That the said grantee shall clear its rights of way within the Yosemite National Park and the Stanislaus National Forest and over any public land of any debris or inflammable material as directed by the Secretary of the Interior and the Secretary of Agriculture, respectively; and said grantee shall permit any road or trail which it may construct over the public lands, the Yosemite National Park, or the Stanislaus National Forest to be freely used by the officers of the Government and by the public, and shall permit officers of the Government, for official business only, the free use of any telephone or telegraph lines, or equipment, or railroads that it may construct and maintain within the Yosemite National Park and the Stanislaus National Forest, or on the public lands, together with the right to connect with any such telephone or telegraph lines private telephone wires for the exclusive use of said Government officers: *And provided further*, That all reservoirs, dams, conduits, power plants, water power and electric works, bridges, fences, and other structures not of a temporary character shall be sightly and of suitable exterior design and finish so as to harmonize with the surrounding landscape and its use as a park; and for this purpose all plans and designs shall be submitted for approval to the Secretary of the Interior.

SEC. 5. That all lands over which the rights of way mentioned in this act shall pass shall be disposed of only subject to such easements: *Provided, however*, That the construction of the aforesaid works shall be diligently prosecuted without cessation of such construction for a period of three consecutive years, and in the event that the Secretary of the Interior shall find and determine that there has not been diligent prosecution of the work or of some integral and essential part thereof, or that there has been a cessation of such construction for a period of three consecutive years, then he may declare forfeited all rights of the grantee herein as to that part of the works not constructed, and request the Attorney General, on behalf of the United States, to commence suit in the United States District Court for the Northern District of California for the purpose of procuring a judgment declaring all such rights forfeited to the United States, and upon such request it shall be the duty of the said Attorney General to commence and prosecute to a final judgment such suit: *Provided further*, That the Secretary of the Interior shall make no such finding and take no such action if he shall find that the construction or progress of the works has been delayed or prevented by the act of God or the public enemy, or by engineering or other difficulties that could not have been reasonably foreseen and overcome, or by other special or peculiar difficulties beyond the control of the said grantee: *Provided further*, That, in the exercise of the rights granted by this act, the grantee shall at all times comply with the regulations herein authorized, and in the event of any material departure therefrom the Secretary of the Interior or the Secretary of Agriculture, respectively, may take such action as may be necessary in the courts or otherwise to enforce such regulations.

SEC. 6. That the grantee is prohibited from ever selling or letting to any corporation or individual, except a municipality or a municipal water district or irrigation district, the right for such corporation or individual to sell or sublet the water or the electric energy sold or given to it or him by the said grantee: *Provided*, That the rights hereby granted shall not be subject to sale, assignment, or transfer to any private person, corporation, or association.

SEC. 7. That for and in consideration of the grant by the United States as provided for in this act the said grantee shall assign, free of cost to the United States, all roads and trails built under the provisions hereof; and further, after the expiration of five years from the passage of this act the grantee shall pay to the United States the sum of \$15,000 annually for a period of ten years, beginning with the expiration of the five-year period before mentioned, and for the next ten years following \$20,000 annually, and for the remainder of the term of the grant shall, unless otherwise provided by Congress, pay the sum of \$30,000 annually, said sums to be paid on the first day of July of each year. Said sums shall be kept in a separate fund by the United States, to be applied to the building and maintenance of roads and trails and other improvements in the Yosemite National Park and other national parks in the State of California. The Secretary of the Interior shall designate the uses to be made of sums paid under the provisions of this section under the condition specified herein.

SEC. 8. That the word "grantee" as used herein shall be understood as meaning the city and county of San Francisco and such other municipalities or water district or water districts as may, with the consent of the city and county of San Francisco or in accordance with the laws of the State of California, hereafter participate in or succeed to the beneficial rights and privileges granted by this act.

SEC. 9. That this grant is made to the said grantee subject to the observance on the part of the grantee of all the conditions hereinbefore and hereinafter enumerated:

(a) That upon the completion of the Hetch Hetchy Dam or the Lake Eleanor Dam, in the Yosemite National Park, by the grantee, as herein specified, and upon the commencement of the use of any reservoirs thereby created by said grantee as a source of water supply for said grantee, the following sanitary regulations shall be made effective within the watershed above and around said reservoir sites so used by said grantee:

First. No human excrement, garbage, or other refuse shall be placed in the waters of any reservoir or stream or within three hundred feet thereof.

Second. All sewage from permanent camps and hotels within the watershed shall be filtered by natural percolation through porous earth or otherwise adequately purified.

Third. No person shall bathe, wash clothes or cooking utensils, water stock, or in any way pollute the water within the limits of the Hetch Hetchy Reservoir or any reservoir constructed by the said grantee under the provisions of this grant, or in the streams leading thereto, within one mile of said reservoir; or, with reference to the Hetch Hetchy Reservoir, in the waters from the reservoir or waters entering the river between it and the "Early intake" of the aqueduct, pending the completion of the aqueduct between "Early intake" and the Hetch Hetchy Dam site.

Fourth. The cost of the inspection necessary to secure compliance with the sanitary regulations made a part of these conditions, which inspection shall be under the direction of the Secretary of the Interior, shall be defrayed by the said grantee.

Fifth. If at any time the sanitary regulations provided for herein shall be deemed by said grantee insufficient to protect the purity of the water supply, then the said grantee shall install a filtration plant or provide other means to guard the purity of the water. No other sanitary rules or restrictions shall be demanded by or granted to the said grantee as to the use of the watershed by campers, tourists, or the occupants of hotels and cottages.

(b) That the said grantee shall recognize the prior rights of the Modesto Irrigation District and the Turlock Irrigation District, as now constituted under the laws of the State of California, or as said districts may be hereafter enlarged to contain in the aggregate not to exceed three hundred thousand acres of land to receive two thousand three hundred and fifty second-feet of the natural daily flow of the Tuolumne River, measured at the La Grange Dam, whenever the same can be beneficially used by said irrigation districts, and that the grantee shall never interfere with said rights.

(c) That whenever said irrigation districts receive at the La Grange Dam less than two thousand three hundred and fifty second-feet of water, and when it is necessary for their beneficial use to receive more water, the said grantee shall release free of charge, out of the natural daily flow of the streams which it has intercepted, so much water as may be necessary for the beneficial use of said irrigation districts not exceeding an amount which, with the waters of the Tuolumne and its tributaries, will cause a flow at La Grange Dam of two thousand three hundred and fifty second-feet; and

shall also recognize the rights of the said irrigation districts to the extent of four thousand second-feet of water out of the natural daily flow of the Tuolumne River for combined direct use and collection into storage reservoirs as may be provided by said irrigation districts during the period of sixty days immediately following and including April fifteenth of each year, and shall during such period release free of charge such quantity of water as may be necessary to secure to the said irrigation districts such four thousand second-feet flow or portion thereof as the said irrigation districts are capable of beneficially directly using and storing below Jawbone Creek: *Provided, however,* That at such times as the aggregate daily natural flow of the watershed of the Tuolumne and its tributaries measured at the La Grange Dam shall be less than said districts can beneficially use and less than two thousand three hundred and fifty second-feet, then and in that event the said grantee shall release free of charge the entire natural daily flow of the streams which it has under this grant intercepted.

(d) That the said grantee whenever the said irrigation districts desire water in excess of that to which they are entitled under the foregoing, shall on the written demand of the said irrigation districts sell to the said irrigation districts from the reservoir or reservoirs of the said grantee such amounts of stored water as may be needed for the beneficial use of the said irrigation districts at such a price as will return to the grantee the actual total costs of providing such stored water, such costs to be computed in accordance with the currently accepted practice of public cost accounting as may be determined by the Secretary of the Interior, including, however, a fair proportion of the cost to said grantee of the conduit, lands, dams, and water-supply system included in the Hetch Hetchy and Lake Eleanor sites; upon the express condition, however, that the said grantee may require the said irrigation districts to purchase and pay for a minimum quantity of such stored water, and that the said grantee shall be entitled to receive compensation for a minimum quantity of stored water and shall not be required to sell and deliver to the said irrigation districts more than a maximum quantity of such stored water to be released during any calendar year: *Provided, however,* That if the said irrigation districts shall develop sufficient water to meet their own needs for beneficial use and shall so notify in writing the Secretary of the Interior, the said grantee shall not be required to sell or deliver to said irrigation districts the maximum or minimum amount of stored waters hereinbefore provided for, and shall release the said districts from the obligation to pay for such stored water: *And provided further,* That said grantee shall without cost to said irrigation districts return to the Tuolumne River above the La Grange Dam for the use of the said irrigation districts all surplus or waste water resulting from the development of hydroelectric energy generated by the said grantee.

(e) That such minimum and maximum amounts of such stored water to be so released during any calendar year as hereinbefore provided and the price to be paid therefor by the said irrigation districts are to be determined and fixed by the Secretary of the Interior in accordance with the provisions of the preceding paragraph.

(f) That the Secretary of the Interior shall revise the maximum and minimum amounts of stored water to be supplied to said irrigation districts by said grantee as hereinbefore provided, whenever the said irrigation districts have properly developed the facilities of the Davis Reservoir of the Turlock Irrigation District and the Warner-Dallas Reservoir of the Modesto Irrigation District to the fullest practicable extent up to a development not exceeding in cost \$15 per acre-foot storage capacity, and whenever additional storage has been provided by the said irrigation districts which is necessary to the economical utilization of the waters of said watershed, and also after water losses and wastes have been reduced to such reasonable minimum as will assure the economical and beneficial use of such water.

(g) That the said grantee shall not be required to furnish more than the said minimum quantity of stored water hereinbefore provided for until the said irrigation districts shall have first drawn upon their own stored water to the fullest practicable extent.

(h) That the said grantee shall not divert beyond the limits of the San Joaquin Valley any more of the waters from the Tuolumne watershed than, together with the waters which it now has or may hereafter acquire, shall be necessary for its beneficial use for domestic and other municipal purposes.

(i) That the said grantee shall, at its own expense, locate and construct, under the direction of the Secretary of the Interior, such weirs or other suitable structures on sites to be granted, if necessary, by the United States, for accurately measuring the flow in the said river at or above La Grange Dam, and measuring the flow into and out from the reservoirs or intakes of said districts, and into and out from any reservoirs constructed by the said grantee, and at any other point on the Tuolumne River or its tributaries, which he may designate, and fit the same with water-measuring apparatus

satisfactory to said Secretary and keep such hydrographic records as he may direct, such apparatus and records to be open to inspection by any interested party at any time.

(j) That by "the flow," "natural daily flow," "aggregate daily natural flow," and "what is naturally flowing," as are used herein, is meant such flow as on any given day would flow in the Tuolumne River or its tributaries if said grantee had no storage or diversion works on the said Tuolumne watershed.

(k) That when the said grantee begins the development of the Hetch Hetchy Reservoir site it shall undertake and vigorously prosecute to completion a dam at least two hundred feet high, with a foundation capable of supporting said dam when built to its greatest economic and safe height.

(l) That the said grantee shall, upon request, sell or supply to said irrigation districts, and also to the municipalities within either or both said irrigation districts, for the use of any land owner or owners therein for pumping subsurface water for drainage or irrigation, or for the actual municipal public purposes of said municipalities (which purposes shall not include sale to private persons or corporations) any excess of electrical energy which may be generated, and which may be so beneficially used by said irrigation districts or municipalities, when any such excess of electric energy may not be required for pumping the water supply for said grantee and for the actual municipal public purposes of the said grantee (which purposes shall not include sale to private persons or corporations) at such price as will actually reimburse the said grantee for developing and maintaining and transmitting the surplus electrical energy thus sold; and no power plant shall be interposed on the line of the conduit except by the said grantee, or the lessee, as hereinafter provided, and for the purposes and within the limitations in the conditions set forth herein: *Provided*, That said grantee shall satisfy the needs of the landowners in said irrigation districts for pumping subsurface water for drainage or irrigation, and the needs of the municipalities within such irrigation districts for actual municipal public purposes, after which it may dispose of any excess electrical energy for commercial purposes.

(m) That the right of said grantee in the Tuolumne water supply to develop electric power for either municipal or commercial use is to be made conditional for twenty years following the completion of any portion of the works adapted to the generation of electrical energy, as follows: The said grantee shall within three years from the date of completion of said portion of the works install, operate, and maintain apparatus capable of developing and transmitting not less than ten thousand horsepower of electric power for municipal and commercial use, said ten thousand horsepower to be actually used or offered for use; and within ten years from the completion of said portion of the works not less than twenty thousand horsepower; and within fifteen years therefrom not less than thirty thousand horsepower; and within twenty years therefrom not less than sixty thousand horsepower, unless in the judgment of the Secretary of the Interior the public interest will be satisfied with a lesser development. The said grantee shall develop and use hydroelectric power for the use of its people and shall, at prices to be fixed under the laws of California or, in the absence of such laws, at prices approved by the Secretary of the Interior, sell or supply such power for irrigation, pumping, or other beneficial use, said prices not to be less than will return to said grantee the actual total costs of providing and supplying said power, which costs shall be computed in accordance with the currently accepted practice of public cost accounting, as shall be determined by the Secretary of the Interior, including, however, a fair proportion of cost of conduit, lands, dams, and water-supply system; and further, said grantee shall, before using any of said water for the purpose of developing hydroelectric power, file such maps, surveys, field notes, or other data as may be required by law, and shall conform to any law existing and applicable to said subject of development as said hydroelectric power for municipal or commercial uses.

(n) That after the period of twenty years hereinbefore provided for the development, transmission, use, and sale of electric power, the Secretary of the Interior, under authorization hereby given, may require the grantee, within a time fixed by the Secretary, to develop, transmit, and use, or offer for sale, such additional power, and also such power less than sixty thousand horsepower as the grantee may have failed to develop, transmit, use, or sell, within the twenty years aforesaid, as in the judgment of said Secretary the grantee may or ought to develop under this grant, and which in his judgment the public interest demands or convenience requires; and in case of the failure of the grantee to carry out any such requirements of the Secretary of the Interior the latter is hereby authorized so to do, and he may, in such manner and form and upon such terms and conditions as he may determine, provide for the development, transmission, use, and sale of such additional power and such power not so developed, transmitted, or used by the grantee at the end of said twenty years

up to sixty thousand horsepower; and for that purpose the Secretary of the Interior may take possession of and lease to such person or persons as he may designate such portion of the rights of way, structures, dams, conduits, and other property acquired or constructed by the grantee hereunder as may be necessary for the development, transmission, use, and sale of such power.

(o) That the rates or charges to be made by the grantee or by any lessee under the last preceding paragraph for the use of power for commercial purposes shall at all times conform to the laws of the State of California or, in the absence of any such law, be subject to the approval of the Secretary of the Interior, and in the absence of such law no rates or charges shall be made, fixed, or collected without such approval, and the grantee shall at any time, upon the demand of the Secretary of the Interior, allow the latter or such person or persons as he may designate full and free access, right, and opportunity to examine and inspect all of the grantee's books, records, and accounts, and all the works constructed and property occupied hereunder by the grantee.

(p) That this grant is upon the further condition that the grantee shall construct on the north side of the Hetch Hetchy Reservoir site a scenic road or trail, as the Secretary of the Interior may determine, above and along the proposed lake to such point as may be designated by the said Secretary, and also leading from said scenic road or trail a trail to the Tiltill Valley and to Lake Vernon, and a road or trail to Lake Eleanor and Cherry Valley via McGill Meadow; and likewise the said grantee shall build a wagon road from Hamilton or Smiths Station along the most feasible route adjacent to its proposed aqueduct from Groveland to Portulaca or Hog Ranch and into the Hetch Hetchy Dam site, and a road along the southerly slope of Smiths Peak from Hog Ranch past Harden Lake to a junction with the old Tioga Road, in section four, township one south, range twenty-one east, Mount Diablo base and meridian, and such roads and trails made necessary by this grant, and as may be prescribed by the Secretary of the Interior. Said grantee shall have the right to build and maintain such other necessary roads or trails through the public lands, for the construction and operation of its works, subject, however, to the approval of the Secretary of Agriculture in the Stanislaus National Forest, and the Secretary of the Interior in the Yosemite National Park. The said grantee shall further lay and maintain a water pipe, or otherwise provide a good and sufficient supply of water for camp purposes at the Meadow, one-third of a mile, more or less, southeasterly from the Hetch Hetchy Dam site.

That all trail and road building and maintenance by the said grantee in the Yosemite National Park and the Stanislaus National Forest shall be done subject to the direction and approval of the Secretary of the Interior or the Secretary of Agriculture according to their respective jurisdictions.

(q) That the said grantee shall furnish water at cost to any authorized occupant within one mile of the reservoir and in addition to the sums provided for in section seven it shall reimburse the United States Government for the actual cost of maintenance of the above roads and trails in a condition of repair as good as when constructed.

(r) That in case the Department of the Interior is called upon, by reason of any of the above conditions, to make investigations and decisions respecting the rights, benefits, or obligations specified in this act, which investigations or decisions involve expense to the said Department of the Interior, then such expense shall be borne by said grantee.

(s) That the grantee shall file with the Secretary of the Interior, within six months after the approval of this act, its acceptance of the terms and conditions of this grant.

(t) That the grantee herein shall convey to the United States, by proper conveyance, a good and sufficient title free from all liens and encumbrances of any nature whatever, any and all tracts of land which are now owned by said grantee within the Yosemite National Park or that part of the national forest adjacent thereto not actually required for use under the provisions of this act, said conveyance to be approved by and filed with the Secretary of the Interior within six months after the said grantee ceases to use such lands for the purpose of construction or repair under the provisions of this act.

(u) That the city and county of San Francisco shall sell to the United States, for the use of the War Department, such water as the War Department may elect to take, and shall deliver the same through its system in or near the city of San Francisco to the mains or systems of such military reservations in that vicinity as may be designated by the Secretary of War, under such rules and regulations as he may prescribe. In payment for such water and the delivery thereof the United States shall pay to the said city and county of San Francisco a rental, to be calculated at a fixed rate per one thousand gallons, said rate not to exceed the actual cost of said water to said city and county for all the water so furnished, as determined by meter measurements: *And provided further*, That payment of said rental shall be made by the local disbursing officer of the War Department in the usual manner.

SEC. 10. That this grant, so far as it relates to the said irrigation districts, shall be deemed and held to constitute a binding obligation upon said grantee in favor of the said irrigation districts which said districts, or either of them, may judicially enforce in any court of competent jurisdiction.

SEC. 11. That this act is a grant upon certain express conditions specifically set forth herein, and nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the State of California relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this act, shall proceed in conformity with the laws of said State.

Bill H. R. 6281 was substituted for bills H. R. 112 and 4319, Sixty-third Congress, first session. Full and exhaustive hearings were had on bill H. R. 6281, which hearings were printed. Bill H. R. 6914 was introduced in place of H. R. 6281, and after further hearings bill 7207 was introduced to take the place of all former bills, and after full hearings bill H. R. 7207 received the unanimous approval of the Committee on Public Lands and is the one set out in full herein.

Bill H. R. 7207 was referred to the Department of the Interior, and following is the report received thereon:

DEPARTMENT OF THE INTERIOR,
Washington, August 2, 1913.

Hon. SCOTT FERRIS,
*Chairman House Committee on the Public Lands,
House of Representatives.*

MY DEAR MR. FERRIS. Your committee has referred to this department for report and recommendations H. R. 7207, being a bill granting to the city and county of San Francisco certain rights of way in, over, and through certain public lands, the Yosemite National Park and Stanislaus National Forest, and certain lands in the Yosemite National Park and Stanislaus National Forest, and the public lands in the State of California, and for other purposes.

In this connection, I call your attention to your letter of June 23, 1913, transmitting to the Secretary of the Interior a copy of proof print of a House bill to be introduced by Representative Raker, requesting that he furnish the Committee with report thereon; and to the Secretary's letter of June 24, 1913, in reply thereto, wherein he discussed the matter at length, suggested certain amendments, and approved, with his reasons therefor, the object of the bill and the grant therein proposed.

The proof print became H. R. 6281, and I call your attention to the Secretary's letters of July 9, 1913, July 10, 1913, and July 11, 1913, reporting on H. R. 6281 and supplementing said letter of June 24.

I find that the various suggestions for amendment proposed in the said letters have been substantially incorporated in the present bill with the exception of Section 7 thereof, which now provides for annual payment by the grantee. This amendment of section 7 has met with the approval of the Secretary of the Interior, and I am advised that he has wired you to that effect.

The department, therefore, has no objection to make to H. R. 7207, and heartily recommends that it can be enacted into law.

Very truly, yours,

A. W. JONES,
Acting Secretary.

Bill H. R. 7207 was also referred to Hon. David F. Houston, Secretary of Agriculture, who made report thereon, which report is as follows:

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, D. C., August 2, 1913.

Hon. SCOTT FERRIS,
Chairman Committee on the Public Lands, House of Representatives.

DEAR MR. FERRIS: I have before me a copy of the bill, H. R. 7207, approved unanimously by the Committee on the Public Lands, granting to the city and county of San Francisco certain rights of way through the public lands, national forests, and Yosemite National Park. I have your request that this department make a report thereon and such suggestions as it may see fit to offer.

This bill, H. R. 7207, now before me, does not differ in any essential particular, so far as the matters pertaining to the Department of Agriculture are affected, from the bill which was considered by your committee at the time I testified before it and on which I submitted to you a formal report with the approval of this department. So far as the Department of Agriculture is concerned in this bill, I can see no objection to its passage.

Sincerely, yours,

D. F. HOUSTON,
Secretary.

For the purpose of presenting bill H. R. 7207 with its provisions fully before the House, analysis is made thereof, as follows:

ANALYSIS OF H. R. 7207.

[A bill granting to the city of San Francisco rights of way for water-supply system and incidental hydro-electric power plant in the Yosemite National Park, the Stanislaus National Forest, and public lands in the State of California.]

The theory on which this bill is drawn is that the United States, having sole jurisdiction over the national park, has the right to refuse the grant and also has the right in making the grant to impose certain conditions upon the grantee.

The bill is not drafted nor designed nor intended to usurp the powers of the State of California in the matter of control of the distribution of water. The conditions imposed—which are acquiesced in by the grantee, relate only to the protection of certain rights of the Turlock-Modesto Irrigation District—by recognizing, without affecting one way or the other, prior rights of the said districts to certain waters in the Tuolumne River, the source of this river being the Hetch Hetchy Valley.

Section 1 provides a grant of all necessary rights of way not exceeding 250 feet, as in the judgment of the Secretary of the Interior and the Secretary of Agriculture are required for the construction and operation of a water-supply system for the city of San Francisco and other cities which may hereafter join in the Metropolitan Water District about San Francisco Bay. The grantee is required to file maps showing proposed location of rights of way, power houses, pole lines, roads, trails, bridges, etc., and procure the approval of the Secretary of the Interior as to these locations. Within the jurisdiction of the Stanislaus National Forest, the approval of the Secretary of Agriculture must be procured. This section is analogous to and practically identical with the grant made to the city of Los Angeles for a water-supply system from the Owens River.

Section 2: This section requires the grantee to file with the registers of the United States land offices within three years all maps showing boundaries or locations, and prohibits permanent construction work until maps shall have been filed and approved. Proviso 1 permits changes in location by approval when engineering problems are met and such changes are advisable. Proviso 2 provides that the rights of the grantee already procured shall be given due consideration and relate back to the filing of maps as provided in this section. Proviso 3 is to the effect that copies of maps already filed and approved under previous permits may be approved by the Secretary of the Interior.

Section 3 provides that the rights of way granted shall not be effective over homestead, mining, or other valid claims which in law constitute prior rights unless the grantee shall procure relinquishment by due process and just compensation; and further, the section provides that any such entryman or claimant shall have the right to sell

and the grantee shall have the right to purchase rights of way over homestead or other claims. A proviso prescribes that the act shall not apply to lands embraced in rights of way heretofore approved for the benefit of any party other than the said grantee or its predecessors in interest.

(The language of section 3 and preceding sections is designed to protect the vested rights heretofore procured by the grantee or others.)

Section 4 provides that the grantee shall conform to all regulations prescribed to govern the Yosemite National Park and the Stanislaus National Forest, and further provides that no timber shall be cut in the national park or in the forest reserve except such timber as may be actually necessary to construct, repair, and operate its water and electric-power system. All timber cut shall be designated by the Secretary of the Interior or the Secretary of Agriculture where such timber is outside the right of way. Proviso 1 prohibits the cutting of any timber in the Yosemite National Park, except from land to be submerged or which constitutes an actual obstruction to the rights of way or to any road or trail provided in the act, and to preserve artistic harmony the grantee is compelled to submit designs and structures to the Secretary of the Interior for approval. It is intended that all permanent dams, buildings, etc., shall conform to the landscape surroundings.

(The grantee acquiesces in this proviso, which is designed to prevent the cutting of a stick of timber in the Yosemite National Park, and thus prevent any possible destruction of trees within the reservation, and also to make the park as artistic as possible.)

Proviso 2 of section 4 requires the grantee to construct and maintain bridges and crossings over its rights of way of such character and construction as may be prescribed by the Secretary of the Interior or the Secretary of Agriculture, and, further, the grantee shall, upon order of the United States officials, construct and maintain fences along the rights of way. It is still further provided that the grantee shall clear its rights of way of débris and inflammable material, thus preventing forest fires, and also shall permit the free use by Government officials of all trails, telephone and telegraph lines, railroad and other utilities which may be constructed as adjuncts to the water-supply system. (The requirements of this section cause the grantee to expend a considerable sum in the improvement of the park and the forest reserve and make access to these public places easy and comfortable. The expenditure of this money for this purpose is a consideration, in part, for the grant.)

Section 5 provides that the grant by the Federal Government is an easement and that the lands shall be disposed of only subject to such easement. Proviso 1 compels the grantees to diligently prosecute its construction work without cessation, and in the event that such construction work ceases for a period of three years and the Secretary of the Interior determines the grantee has not been duly diligent, all rights under the grant may be declared forfeited by suit in the United States District Court for the Northern District of California. The Attorney General is required to prosecute such suit to final judgment when requested to do so by the Secretary of the Interior. Proviso 2 provides that the Secretary of the Interior shall not attempt to make a forfeiture if the work of the grantee has been delayed or prevented

by the act of God or the public enemy, or by engineering or other special or peculiar difficulties which could not have been reasonably foreseen and overcome and were beyond the control of the grantee. Proviso 3 compels the grantee to at all times comply with the regulations authorized by the act, and in the event of material departure from said regulations the United States officials may take such action as may be necessary, in the courts or otherwise, to enforce such regulations.

Section 6 provides that the grantee is prohibited from selling or letting to any corporation or individual, except a municipality, a water district, or an irrigation district, the right to sell or sublet the water or electric energy sold or given to it by the grantee; it is provided also that the rights under the grant shall not be subject to sale, assignment, or transfer to any private person, corporation, or association.

(This provision, acquiesced in by the grantee, was designed to prevent any monopoly or private corporation from hereafter obtaining control of the water supply of San Francisco.)

Section 7 provides that for and in consideration of the grant the grantee shall make certain payments, the proceeds of which are to be used exclusively for the construction of roads and other improvements in the Yosemite National Park and other national parks in the State of California. The theory of this section is that San Francisco is receiving certain privileges and benefits from the national park, and that the consideration is for the use of public lands now owned by the United States. The payments proposed will, it is estimated, amount to more money annually than is at present charged to private corporations under similar Federal conditions. It is proposed that the grantee shall pay, beginning five years after the passage of the bill, the sum of \$15,000 annually for a period of 10 years; \$20,000 for a period of 10 years thereafter; and, unless otherwise provided by Congress, \$30,000 annually for the remainder of the term of the grant. The moneys so paid are to be kept in a separate fund by the United States and applied to park improvements as designated by the Secretary of the Interior. Congress retains the power to revise the schedule.

(The amounts specified in this section are approved by the Secretary of the Interior and his subordinates. The method of providing for improvement of the park is also approved.)

Section 8 defines the grantee as the city of San Francisco and such other municipalities or water districts which may, with the consent of the city or in accordance with the laws of the State of California, hereafter participate in or succeed to the beneficial rights and privileges of the act.

(The cities about the Bay of San Francisco have always approved the granting of the Hetch Hetchy Reservoir site to San Francisco, with the understanding that these cities may in the future join with the city of San Francisco in a metropolitan water district. The State law of California provides for the creation of a metropolitan water district, and because of this law the bay cities have not requested at this time be made cograntees. They know they will have the privilege to share in the benefits after San Francisco has made the necessary investment and brought the needed water to the bay cities for domestic use.)

Section 9 requires the grantee to observe sanitary regulations within the Hetch Hetchy watershed and around reservoir sites. These regulations provide that no human excrement, garbage, or other refuse shall be placed in the waters of any reservoir or stream, or within 300 feet thereof; and further, that all sewage from permanent camps or hotels within the watershed shall be filtered by natural percolation through porous earth or otherwise adequately purified; and further, no person shall bathe, wash clothes or cooking utensils, water stock, or in any way pollute the water of the reservoirs constructed under this grant or the streams leading thereto within 1 mile of said reservoir. The cost of inspection necessary to enforce sanitary regulations is to be paid by the grantee, and such inspection shall be under the direction of the Secretary of the Interior. Should these regulations prove insufficient to the grantee, then the grantee shall install a filtration plant, and no other sanitary rules or restrictions shall be granted.

(These sanitary regulations were prepared by experts of the United States Government, and Mr. Allen Hazen, and Prof. Whipple, and are approved by the Board of Army Engineers, the Secretary of the Interior, the Director of the Geological Survey, and others. It is intended that the use of the watershed shall be free to campers and visitors, and that no onerous or prohibitive sanitary regulations shall ever be imposed. The sanitary experts assert that the storage of water in the Hetch Hetchy Reservoir will insure adequate purity, and the Government officials assert that the regulations herein are only those required by common decency and for the protection of campers themselves—and further, these regulations are practically identical with the rules now in force in the Yosemite National Park.)

Paragraph (b), section 9, provides that the grantee shall recognize the prior rights of the Modesto and Turlock Irrigation Districts to 2,350 second-feet of water. This provision permits of the enlargement of the districts as now constituted by an additional area of 43,000 acres but does not affect the distribution of water.

(The irrigation districts having prior rights desire that those rights be recognized on the theory that the Government, having the right to refuse the grant to San Francisco, has therefore the right to place lawful conditions therein. The recognition of these priorities does not impinge upon California State law or modify existing rights.)

Paragraph (c), section 9, is a condition that the grantee shall be required to release the necessary amount of stored water to assure the flow of 2,350 second-feet included in the priorities of the irrigation districts; and, further, condition (c) recognizes the rights of the said irrigation districts to take 4,000 second-feet of water out of the natural flow of the Tuolumne River during a period of 60 days following and including April 15 of each year.

(Condition (c) is a limitation upon the grant, according to the theory of the bill, and is protective of rights already acquired and which can not be disturbed so far as they relate to the irrigation districts. The provision relating to the 4,000 second-feet of water is to provide for the beneficial use by the irrigationists of water which otherwise goes to waste. In the period mentioned, April 15 to June 15, the Tuolumne River is a torrential flood. Fifty miles of watershed intervene between the Hetch Hetchy Dam and the dam of the irrigationists at La Grange. It is proposed that the irriga-

tionists may take up waste waters, store them, and thus lessen the possible draft upon the stored waters of the city. It should be borne in mind that San Francisco does not contemplate interfering with the natural flow of the Tuolumne. The intent is to store flood waters which come from melting snows and leave the normal flow of the river uninterrupted. The benefit to the irrigation districts in this provision is that the landowners will receive the benefit of an investment of approximately \$50,000,000 without being compelled to put up any part of the cost, and the construction of the system will insure the priorities of the irrigationists and they will receive water in the dry period when it is most needed. Without the construction of the Hetch Hetchy Dam there can be no flow in the river during the summer and fall.)

Paragraph (d), section 9, provides that the grantee shall sell unused stored water needed for beneficial use on irrigable lands at cost, to be computed by the Secretary of the Interior. The minimum and maximum of such stored waters to be so delivered to the irrigation districts is to be regulated each calendar year, and if the irrigation districts develop sufficient water in the foothill reservoirs for their own needs then the said grantee shall not be required to sell or deliver any stored waters. It is also provided that water used for the generation of electric power be released in the Tuolumne River free.

(The theory of condition (d) is that after the domestic needs of the city are satisfied and a surplus remains then the irrigation districts shall have the right to purchase so much of this surplus as may be beneficially used. In the event of any dispute the Secretary of the Interior may be called in to adjust the differences.)

Paragraph (e), section 9, provides that the Secretary of the Interior shall fix the minimum and maximum of stored waters to be released, and he shall also fix the price to be paid therefor, in accordance with the provisions of paragraph (b).

Paragraph (f), section 9, provides that the Secretary of the Interior shall revise the maximum and minimum amounts of stored water to be released whenever the irrigation districts shall have properly developed certain reservoir and storage dams in the foothills. In the purview of this condition the irrigationists may not be required to expend more than \$15 per acre-foot storage capacity for the development of local storage, and it is further provided that the grantee may require the stoppage of excessive water losses and waste because of defective ditches.

(This and preceding conditions are acquiesced in by the grantee and by the irrigation districts. The provision is the result of an amicable settlement between the two parties.)

Paragraph (g), section 9, provides that the grantee shall not be required to supply stored water to the irrigation districts until the latter shall have first drawn upon their own stored water to the fullest practicable extent.

(This is also agreeable to all parties.)

Paragraph (h), section 9, provides that the grantee shall not divert beyond the limits of the San Joaquin Valley any waters of the Tuolumne watershed in excess of the amount to be used for domestic and municipal purposes.

(The purpose of this provision is to make possible the use of surplus waters in the San Joaquin Valley and prevent the use of possible

surplus for irrigation of lands remote from the Tuolumne River. John R. Freeman, consulting engineer for San Francisco, suggested that surplus water might be economically used for intensive farming in lands contiguous to San Francisco Bay. Inasmuch as San Francisco expects to purchase the local water supply, and thus acquire sufficient water for local irrigation purposes, it was deemed advisable and economical to provide that surplus from the Tuolumne should be used in the San Joaquin Valley. This is an economic use of water for the highest purpose of all concerned.)

Paragraph (i), section 9, provides that the grantee shall at its own expense provide water-measuring apparatus and keep hydrographic records, which apparatus and records shall be open to inspection by any interested party at any time.

Paragraph (j), section 9, is the engineers' definition of the flow of the Tuolumne River.

Paragraph (k), section 9, requires San Francisco to build a dam at least 200 feet high.

(This means that the city will expend from \$500,000 to \$1,000,000 in excess of initial expenditures necessary for its immediate needs. The intent is to build the dam high enough to provide adequate storage to meet the conditions of the grant, and is primarily a benefit for the irrigationists.)

Paragraph (l), section 9, provides that the grantee shall sell excess of electrical energy to the irrigation districts and municipalities within the irrigation districts for the beneficial use of landowners, whenever such excess is not required for the actual municipal purposes of the grantee. It is also provided that no power plant shall be interposed on the conduit of the grantee, except by the grantee itself. The proviso of the paragraph is that the grantee shall first satisfy the needs of landowners for pumping water for drainage or irrigation and the needs of the municipalities within the irrigation districts for municipal purposes, before excess of electrical power may be sold for commercial purposes.

(This is a direct benefit to the irrigationists, and places no burden or hardship upon the grantee.)

Paragraph (m), section 9, provides for the development of electric power. The grantee is required to develop 10,000 horsepower within three years after the completion of that portion of the system which is usable for power development. Within 10 years thereafter the grantee shall develop 20,000 horsepower; and within 15 years 30,000 horsepower; and within 20 years 60,000 horsepower; unless in the judgment of the Secretary of the Interior the public interests will be satisfied with a lesser development.

The prices of electricity are to be fixed under the laws of California, or if there be no such laws, at prices approved by the Secretary of the Interior, such prices to return to the grantee actual cost of construction.

Paragraph (n), section 9, provides that if the grantee fails to develop horsepower as directed herein, then the Secretary of the Interior may lease to such person or persons as he may designate those portions of the rights of way, structures, dams, etc., as may be necessary for development, use, and sale of power which the grantee has failed or neglected to develop.

(This is a forfeiture penalty to prevent cold storage of power possibilities.)

Paragraph (o), section 9, provides that rates to be charged for power for commercial purposes (in the event that lease is made to another party under paragraph (n)) shall conform to the laws of the State of California, or in the absence of any such law shall be subject to approval by the Secretary of the Interior; and it is also provided that all records, books, etc., shall be open to inspection by the Secretary of the Interior.

Paragraph (p), section 9, provides for the building of roads and trails in the Yosemite National Park as designated by the Secretary of the Interior.

(The routing of these roads and trails was made by Mr. Marshall, of the Geological Survey, who surveyed the Hetch Hetchy Valley and is familiar with all the scenic and topographical conditions there. These roads will cost the city of San Francisco \$500,000 to \$1,000,000, and are to be turned over, free of charge, to the United States. This is one of the important considerations, and carries compensation to the Government for the rights of way granted. The construction of these roads will make the Hetch Hetchy Valley accessible and will provide a convenient and easy way for mountaineers to reach the higher parts of the Sierra. The paragraph also contains a requirement that the grantee shall provide a water supply for camp purposes at the Meadow camping place, a third of a mile from Hetch Hetchy. It is also provided that all trail and road building shall be done subject to the approval and direction of the Secretary of the Interior or the Secretary of Agriculture, according to their respective jurisdictions.)

Paragraph (q), section 9, provides that the grantee shall furnish water at cost to any authorized occupant within 1 mile of the reservoir, and shall repair and maintain roads and trails constructed under the provisions of the grant.

Paragraph (r) provides that the grantee shall pay all the cost of inspection and investigations which may be required of the Department of the Interior where such investigations and inspection involve expense to the department.

Paragraph (s) provides that the grantee shall file an acceptance of the conditions of this act within six months after its passage.

Paragraph (t) requires the grantee to convey to the United States any and all tracts of land now owned by the city within Yosemite National Park or the national forest, which lands are not actually required for use under the provisions of this act.

(The city of San Francisco purchased private lands for the purpose of exchanging the same with the Government in lieu of that portion of the floor of the Hetch Hetchy Valley, which is not owned by the city. The purpose of this plan is to provide suitable and desirable camping places for visitors who may wish to visit the Sierra and who would otherwise have camped in the Hetch Hetchy, and at the same time compensate the United States for lands to be submerged.)

Paragraph (u) provides that the grantee shall sell the water at cost to the military reservations at San Francisco. This was requested by the Secretary of War and is acquiesced in by the city.

Section 10 provides that the conditions of this grant shall be a binding obligation upon the grantee so far as the conditions relate to the irrigation districts.

Section 11 provides that this act shall not be construed as affecting or intending to affect or in any way to interfere with the laws of the

State of California relating to the control, appropriation, use, or distribution of water or any vested right acquired thereunder, and the Secretary of the Interior is directed to proceed in conformity with the laws of the State of California in carrying out the provisions of this act.

CITY OWNS WATER RIGHTS.

The city and county of San Francisco, under the laws of the State of California, has taken and performed all necessary acts to acquire, appropriate, and use the waters of the Tuolumne River, which has been done in strict compliance with the laws regulating the appropriation and use of waters in the State of California, and now has and holds a valid water right by virtue of its acts performed under the laws of said State.

The committee heard all parties who desired to be heard upon the bill, and granted full and free opportunity for such hearing, and at such hearings all parties were heard, and the committee were unanimously of the opinion that the legislation provided for in bill H. R. 7207 is of an urgent character, and should be acted upon at this session of Congress; and by unanimous vote of said committee said bill is approved and action by Congress urged to be taken during the present session.

A statement of the facts and of the testimony presented before the committee follows, the better to enable the Members of the House to fully understand the true conditions surrounding the proposed grant by the Government to San Francisco under bill H. R. 7207.

FACTS ABOUT HETCH HETCHY.

HISTORY OF SAN FRANCISCO'S EFFORT TO OBTAIN A MUNICIPAL WATER SUPPLY FROM THE SIERRA.

The use of the Hetch Hetchy Valley in the Yosemite National Park as a reservoir for storing water for the city of San Francisco and other cities and for irrigation purposes is urged by the following:

- Hon. Franklin K. Lane, Secretary of the Interior.
- Hon. David F. Houston, Secretary of Agriculture.
- Dr. George Otis Smith, Director United States Geological Survey.
- Hon. F. H. Newell, chairman United States Reclamation Commission.
- Hon. Henry S. Graves, Chief Forester, United States Forest Service.
- The Board of Army Engineers: Col. John Biddle, Lieut. Col. Harry Taylor, and Col. Spencer Cosby.
- Hon. Gifford Pinchot, former Chief Forester.
- Two Senators and 11 Representatives from the State of California.
- The people of Oakland.
- The people of Berkeley.
- The people of Alameda.
- The people of Palo Alto.
- The people of San Jose.
- The people of Menlo Park.
- The people of Richmond.
- The Legislature of the State of California.
- The governor of the State of California.
- The engineer of the State of California.
- The Conservation Commission of the State of California.
- The people of San Francisco.
- The Chamber of Commerce of San Francisco.
- The labor unions of San Francisco.
- The improvement clubs of San Francisco.

The newspapers of San Francisco and cities about San Francisco Bay.
 The landowners of the Turlock irrigation district.
 The landowners of the Modesto irrigation district.
 The Commonwealth Club of California.
 Many members of the Sierra Club of California.
 The Native Sons and Daughters of California.
 THE PUBLIC LANDS COMMITTEE OF THE HOUSE OF REPRESENTATIVES.

CITY'S URGENT NEED.

San Francisco urgently needs an additional supply of water.

The city is confronted by an emergency—practically one-third of the municipality is without adequate water supply.

The condition is so grave that the water company now supplying the city has advertised in all the papers warning the people not to wash down their steps, sprinkle their lawns, or otherwise waste water.

The reason for this is that there have been two years of light rainfall, and the storage reservoirs have not been refilled.

San Francisco is situated on a narrow, arid peninsula, where there are no summer rains, and it is necessary to store a water supply during the rainy season.

The city has a population of 500,000 and its water supply is approximately 40,000,000 gallons a day.

Denver, with half that population, has a supply of 200,000,000 gallons a day.

SITUATION DEPLORABLE.

Half the present water supply of San Francisco is brought from gravel beds beneath agricultural lands in Alameda County. The other half is stored water in peninsular reservoirs. Proof of this emergency is given by William Bourn, president of the Spring Valley Water Co., who testified under oath before the water rates committee of the board of supervisors on May 19, 1913, as follows:

The situation to-day in this city—there is nothing as deplorable, there is nothing in my life that I regret as much as the water situation in San Francisco to-day. It is doing this city more harm than the earthquake ever did it.

At that same hearing, referring to the Hetch Hetchy project, Mr. Bourn said:

If I had it in my power to give you Hetch Hetchy to-morrow, I would give it to you. If you think the Spring Valley Water Co. is going to make any objection to your application to Congress you are greatly mistaken.

For 12 years San Francisco has been endeavoring to procure a water supply from the Hetch Hetchy Valley.

The city's object was opposed until this year by the Spring Valley Water Co., the irrigationists of the Turlock-Modesto irrigation district, the promoters of several water schemes which the city did not want, and by a small group of men who based their objections upon love of nature and opposed the creation of a lake where a canyon now exists.

All this opposition, except that of the nature lovers, is withdrawn.

The city has arranged for an amicable condemnation proceeding to acquire the property of the Spring Valley Water Co.

The city has agreed to protect the prior rights of the irrigationists and will spend from \$500,000 to \$1,000,000 more than is required at this time to increase storage to guarantee water for irrigation.

CITY OWNS HETCH HETCHY VALLEY.

The city owns two-thirds of the floor of the Hetch Hetchy Valley, and also owns a portion of the dam site.

The city has spent \$1,750,000 in the purchase of privately-owned rights in the Hetch Hetchy Valley and the Yosemite Park, and now asks Congress for permission to build a dam and for rights of way for conduits, pole lines, etc., over the public lands.

In creating this water system, the city agrees to supply water at cost to irrigationists, and will also supply electric energy at cost to landowners in the Turlock-Modesto district.

The power potentiality of the stream is estimated at 115,000 horsepower in its ultimate development. It is proposed to develop this energy in 10,000 horsepower units, and use the power for public purposes in San Francisco and adjoining cities.

The following data, from the report of the Army engineers and from the testimony of the engineers before the Public Lands Committee, give the acreage and capacity of the proposed reservoirs:

	Elevation, dam site.	Maximum height of dam.	Acres in reservoir site.	Storage capacity.
	<i>Feet.</i>	<i>Feet.</i>		<i>Acre-feet.</i>
Hetch Hetchy.....	3,500	325	1,330	352,000
Lake Eleanor.....	5,000	245	1,443	288,000
Cherry Valley.....	5,000	150	960	56,800

	<i>Acre.</i>
Stanislaus National Forest.....	1,135,500
Yosemite National Park (1,124 square miles)	719,622

Lands owned by San Francisco in Yosemite National Park.....	1,960.33
Lands owned by San Francisco in forest reserve	1,446.13

3,406.46

Total area which will be flooded in three reservoirs, 3,373 acres.

(See H. Doc. 54, 63d Cong., 1st sess.)

BAY CITIES UNITE IN PETITION.

The cities around San Francisco Bay join in asking that San Francisco be given the Hetch Hetchy grant. These cities propose—and the State law permits—to organize a metropolitan water district and the Hetch Hetchy system, together with the local water, will insure an adequate supply for the future.

No injury can possibly be done to any one or to any interest by the construction of this system. On the contrary, it will be a development of resources for the beneficial use of millions of people.

The ultimate cost of the project is estimated at \$77,000,000. The initial cost for the first installation necessary to bring 200,000,000 gallons of water to the city is \$37,500,000.

BONDS VOTED IN 1910.

In 1910 the city voted overwhelmingly \$45,000,000 in bonds for the construction of this water system. There were 30,000 vote casts for and 1,200 against this bond issue.

A water famine is impending, and the city desires to get to work at once on its Hetch Hetchy supply. Pending the construction emergency development of water has to be made, and this work ought to begin at once. It is impossible for the city to do the emergency work until the larger question—the source of the mountain supply—is settled, as no part of the bond money available can be used unless it is expended for an integral part of the Hetch Hetchy system.

With the Hetch Hetchy grant assured, additional pipes, which ultimately can be used in the Hetch Hetchy scheme, will be laid, and the stored waters now available can be drawn lower and wells sunk for neighborhood supplies.

COSTLY WATER.

To-day San Francisco pays higher rates for water than any city of its size in the world. The rates are 15 to 21 cents per 1,000 gallons.

When these water rates are added to a burdensome tax rate caused by a \$500,000,000 loss from earthquake and fire in 1906, no reasonable person should object to the city obtaining an adequate supply at the cheapest cost.

Any alternative supply would cost the city \$20,000,000 more, with no credit for power development. This \$20,000,000 difference in cost does not represent the full amount of difference, as any other source in the State of California which the city might use is now owned by power companies and other corporations.

TO CONVERT CANYON INTO LAKE.

Hetch Hetchy Valley is a gorge in the Yosemite National Park. It is 30 miles from Yosemite Valley proper. The watershed is composed wholly of granite mountains, on which there is a heavy snowfall every winter. It is proposed to convert the valley into a magnificent lake and store the water from the melting snows which now run off in torrential floods each year, doing good to no one and at times causing great damage.

HISTORY OF SAN FRANCISCO WATER PROBLEM.

In 1900 engineers and thoughtful citizens realized that the existing local supply from the peninsula and across the bay was not sufficient for the progressive growth of the city. In 1901 the city engineer of San Francisco was directed to examine available sources of water supply from the mountains. Mr. C. E. Grunsky, that engineer, afterwards selected as commissioner on the Panama Canal, and still later engineer of the Reclamation Service, made a comprehensive survey of Sierra sources. In his work he spent \$50,000 and something over a year in time. He and his assistants examined, first, the Spring Valley waterworks, with 12 separate sources as auxiliaries; second, Lake Tahoe; third, the Yuba River; fourth, the Feather River; fifth,

the American River; sixth, the Sacramento River; seventh, the Eel River; eighth, Clear Lake; ninth, the San Joaquin River; tenth, the Stanislaus River; eleventh, the Mokelumne River; twelfth, the Tuolumne River; thirteenth, the bay shore gravels, in and around San Francisco and Alameda County; and fourteenth, the Bay City Water Co.'s reserve.

As a result of this investigation, the Tuolumne River, its source in the Hetch Hetchy Valley, draining 1,501 square miles of the Sierra Mountains, with an annual rainfall of from 20 to 50 inches and a mean annual run-off of 24 inches, or nearly 2,000,000 acre-feet, was selected.

SCIENCE AND SENSE APPROVE PROJECT.

Every engineering, sanitary, and economic factor favored the Hetch Hetchy as the source. Added to these factors were freedom from complicating water rights and additional power possibilities outside the national reservation.

The distance which the water is to be brought is 142 miles. It is proposed to install 10-foot pressure tunnels, lined with concrete, through the mountains, and 10-foot steel pipes across the valley. This system will bring water to San Francisco under sufficient pressure to boost it to the highest levels without pumping. The plans originally made by city engineers C. E. Gransky and Marsden Manson were revised by Mr. John R. Freeman, probably the most noted hydraulic engineer in the world. Mr. Freeman brought to his assistance a group of noted experts, and now the work is in charge of M. M. O'Shaughnessy, city engineer, who has had extended experience in the construction of water systems in California, the Southwest, and Hawaii. Mr. Freeman remains as consulting engineer.

Immediately following Mr. Grunsky's report selecting the Hetch Hetchy Valley, the then mayor of the city, Hon. James D. Phelan, set about to perfect water rights. At that time, 1901, the Hetch Hetchy Valley was not in a national park. The city could not as a municipality make filings for water under the laws of California at that time. Therefore Mr. Phelan in his individual capacity made filings, perfected them, and transferred them to the city of San Francisco. By this procedure San Francisco obtained priorities and has, in spite of all obstacles, kept the city's rights alive.

Subsequently the Hetch Hetchy Valley was included in the national parks at the time the State of California ceded the Yosemite Valley to the United States.

Application was made to Secretary of the Interior Hitchcock for a permit to construct the dam and for rights of way. Mr. Hitchcock refused the permit and directed the city to buy out the Spring Valley Water Co. This was the beginning of trouble. Bitter contention arose over the water rates charged by the company and over a purchase price. No agreement could be reached, and for several years the problem remained unsettled.

GARFIELD GAVE LIMITED PERMIT.

When James R. Garfield became Secretary of the Interior San Francisco renewed her application for a permit. There was bitter opposition. After investigation, Secretary Garfield, on May 11,

1908, authorized the city to use Lake Eleanor and Cherry Creek, sources contiguous to the Hetch Hetchy Valley, and part of the Tuolumne watershed. About this time a group of men adverse to the city's interest secured an option on 720 acres of land which the city had to have and immediately ran up the price. This scheme caused delay. In 1909 the city voted \$600,000 bonds for the purpose of acquiring privately owned lands and water rights, and part of the expenditure of this sum was \$174,311.20 for the 720 acres of land in the Hetch Hetchy Valley. This land was of value to the city, and a number of private interests were trying to acquire it for the purpose of developing power, and as the Government had made the condition that private ownership be bought out, the city had to pay the price asked.

ARMY BOARD INVESTIGATES.

In 1910, at the request of the President of the United States, a board of three Army engineers was appointed to investigate and analyze the data and report on all available sources for a water supply for San Francisco.

This board was composed of Col. John Biddle, Col. Harry Taylor, and Col. Spencer Cosby. The investigation was completed in December, 1912, and the Army board report was filed in February, 1913. (H. Doc. 54, 63d Cong., 1st sess.)

Secretary of the Interior Fisher, with the Army board, the engineers of the Geological Survey, the Directors of the Reclamation Service and the Geological Survey, and other Government experts, conducted a 10-day oral hearing on all the reports submitted in November and December, 1912.

UNITED STATES ENGINEERS APPROVE.

As a result of all this, the Army board reported in favor of San Francisco, stating that the Hetch Hetchy was the most economical and available source of water supply for the bay cities.

Secretary Fisher did not issue the permit. He received the Army board report a few days before his retirement from office, and passed the question on to his successor and to Congress.

Secretary Lane, having been the city attorney of San Francisco and an attorney of record in the Hetch Hetchy proceedings, while he urges the grant, felt that it were better procedure for the city to obtain its authorization from Congress.

These facts and additional data are more clearly set forth in the transcript of proceedings by Hon. Percy V. Long, city attorney of San Francisco. (See Vol. I of hearings, beginning at p. 94; see also engineering history by M. M. O'Shaughnessy, p. 130, Vol. I.) Mr. O'Shaughnessy says in part:

In California we are often subject to a succession of two and sometimes three dry years. For a municipal supply this involves having a reservoir and storage capacity able to tide over such a dry period. In San Francisco for the past two years there has been a shortage of over 50 per cent of rainfall, and this has resulted in leaving our reservoirs in a very depleted condition, so that the public is very much alarmed as to what the outcome is going to be. Personally, as the city official most directly responsible for improving conditions, it is a subject of

very grave alarm, and for the past three or four months I have been making explorations all over the city in our narrow peninsula trying to develop what strata there is that will be capable, in this emergency, of relieving our situation. There is no other city in the United States at the present time of the size of San Francisco confronted with such a situation.

Mr. O'Shaughnessy says further that the Spring Valley Water Co. is supplying about 41,500,000 gallons per day. In addition there are drawn from private wells about 8,000,000 gallons per day, so that the daily consumption is about 50,000,000 gallons. He adds that if the present demands were supplied, the consumption would be 75,000,000 gallons per day.

When it is considered that San Francisco is growing very rapidly, and that whole districts can not be improved, homes built, and sanitary requirements fulfilled because of lack of water, it is apparent that San Francisco must have more water than is available from any nearby source.

ALL WATER NEEDED FOR USE.

Supplementing Mr. O'Shaughnessy's judgment is the following from the report of the Board of Army Engineers:

In one important respect the situation in California requires special consideration. In California all water has great value, due to the large extent of arid and semiarid land that can be made fertile by the use of water, irrigation is assuming great importance; due to lack of coal and the opportunity for economical water-power development, the use for the latter purpose will surely be greatly extended. IN A RELATIVELY FEW YEARS PRACTICALLY ALL AVAILABLE WATER WILL DOUBTLESS BE APPROPRIATED FOR ONE OR THE OTHER PURPOSE, AND IT WILL THEN BE POSSIBLE TO OBTAIN IT FOR MUNICIPAL USE ONLY AT GREAT COST AND DAMAGE TO EXISTING COMMUNITIES AND INDUSTRIES. IT IS THEREFORE NECESSARY TO-DAY FOR THE CITIES OF CALIFORNIA TO LOOK FURTHER AHEAD THAN IN MOST OTHER PARTS OF THE COUNTRY AND TO TAKE SUCH STEPS THAT IN THE FUTURE WHEN THEY MAY NEED THE WATER THEY SHALL HAVE THE RIGHT TO TAKE IT. For this reason, it is believed that in making provision for the future supply of San Francisco and other bay cities, a source should be selected, if possible, that is capable of supplying the needs of the communities for the balance of this century. Such a course would seem both wise and reasonable, provided it involves no sacrifice of economy.

With a full knowledge of this entire subject, Gifford Pinchot, leading conservationist of the country, declares to the Land Committee, that San Francisco's proposition is the highest form of conservation he has seen, and he urges the passage of the bill.

CITY READY TO HELP STATE.

Encouraged by the friendly aid of neighboring cities, San Francisco stands ready—money in hand—to make a great investment which will bring incalculable benefit to the State of California. This willingness to pack the burden is not wholly self-interest. The people of the city realize that economic development of the great San Joaquin Valley will help to produce cheaper foodstuffs, attract home builders, and enhance the progress of the State. Imbued with this sentiment and characteristic generosity, the city is willing that an additional million dollars shall be spent for storage of water to be used solely by irrigationists.

And, further, proud of the glories of the State the beauties of the Yosemite, the delights of the Sierra, the city proposes to expend

another million dollars in making the sublime scenery of the Hetch Hetchy and Yosemite accessible to people of small means and limited leisure. The historical associations and the league for the preservation of California landmarks are more jealous of the preservation of California's natural beauties than can be the residents of remote cities—men who never have seen California and probably would never go to the Hetch Hetchy if they had time and opportunity.

A people who undauntedly met the greatest disaster in all the world's history and who rebuilt a devastated city ought to be given sufficient consideration to enable them to select their own water supply and to ease the tax burden which falls most heavily upon those who work for a living. The Hetch Hetchy question is not "a raid upon the Yosemite"; it is a question solely of providing pure water in ample supply to human beings.

ARMY BOARD FINDINGS.

[Extracts from conclusions of Board of U. S. Army Engineers. (H. Doc. No. 54, 1st sess. 63d Cong.)]

The project proposed by the city of San Francisco, known as the Hetch Hetchy project, is about \$20,000,000 cheaper than any other feasible project for furnishing an adequate supply.

* * * * *

The Hetch Hetchy project has the additional advantage of permitting the development of a greater amount of water power than any other.

* * * * *

The board is of the opinion that the use of the Hetch Hetchy Valley as a reservoir site is necessary if the full flow of the upper Tuolumne is to be conserved.

The board further believes that there will be sufficient water, if adequately stored and economically used, to supply both the reasonable demand of the bay communities and the reasonable needs of the Turlock-Modesto irrigation districts for the remainder of this century.

* * * * *

The board believes that on account of the fertility of the lands under irrigation and their aridness without water the necessity of preserving all available water in the Valley of California will sooner or later make the demand for the use of Hetch Hetchy as a reservoir practically irresistible. The board does not think that a delay of a few years in transforming the Hetch Hetchy Valley into a reservoir is of importance, and therefore does not think it necessary to require delaying construction of this reservoir until the Lake Eleanor and Cherry sources have been fully developed.

* * * * *

The board believes that the regulations proposed by the city will be found sufficient to protect the waters from pollution, and that these regulations will tend toward the protection of campers and others using the park and will not be onerous upon them. It recommends, however, that the permit to the city require the city to take other means, such as filtration, to purify its water supply if these regulations are ever deemed insufficient.

The construction of reservoirs, especially the Hetch Hetchy, will destroy a few camping grounds in the park. The construction of the proposed trails will, however, render accessible other parts of the park not now readily reached, and the number of camping places within the park is large.

* * * * *

Construction of Tuolumne system as proposed by city of San Francisco, to be extended over about 50 years, \$77,000,000.

Against the above expenditures there will be developed 115,000 horsepower, having an estimated capitalized net value of \$45,000,000.

LANE URGES ACTION.

[Copy of letter from Hon. Franklin K. Lane, Secretary of the Interior, to Hon. Oscar W. Underwood, House of Representatives, which letter was transmitted to Hon. Scott Ferris, chairman Public Lands Committee.]

THE SECRETARY OF THE INTERIOR,
Washington, May 29, 1913.

MY DEAR MR. UNDERWOOD: I have been in receipt for some time of communications from San Francisco respecting their water situation. The newspapers and others are keeping it as quiet as possible, but the situation is one of emergency and of actual distress. As you doubtless know there has been pending here for some 10 years or more an application before this department for rights of way which will permit the use of the Hetch Hetchy Valley as a reservoir for San Francisco's water supply.

When I was city attorney of San Francisco I made an argument before Secretary Hitchcock in this matter and have been interested in it ever since. Secretary Fisher just before he went out of office said that the matter was one that should be dealt with by Congress. I was appealed to to revoke this decision, but said that owing to the fact that I had been a constant advocate of such a permit and was one of the attorneys of record in the matter I felt it would be improper for me to act further than to express to Congress my opinion that this was a matter almost vital to San Francisco's growth as well as her present needs.

I am advised to-day that the matter of securing the necessary legislation under which the Tuolumne waters may be used for a municipal water supply can be taken up by Congress as an emergency matter if you will say the word. San Francisco's need is so great that I think such action would be entirely justifiable. There is absolutely no politics in the matter. The president of the Spring Valley Water Co., which now supplies the city, in describing the water supply in that city recently said, "It is doing the city more harm than the earthquake ever did."

I quite realize the pressure that is brought to bear upon you with respect to legislation that Members desire to push at this session. This fact, however, is not to be lost sight of, that a delay as to the Hetch Hetchy water supply now means the postponement for at least a year of securing the relief for San Francisco. There is sufficient data already had for the Land Committee to act upon and there is no question of policy involved affecting anything other than this one proposition.

I hope from these considerations that you will find it practicable to make the exception and permit this proposition to be considered during this session of Congress.

Respectfully, yours,

FRANKLIN K. LANE.

HON. OSCAR W. UNDERWOOD,
House of Representatives.

LANE TESTIFIES AT HEARING.

[Extracts from statement of Hon. Franklin K. Lane, Secretary of the Interior, to the Public Lands Committee, House of Representatives, June 25, 1913.]

San Francisco needs a new and adequate water supply. The water supply that she has now has been developed from time to time during the last 50 years, and the city has outgrown it. The situation in San Francisco now is that there are many homes where sufficient water can not be had for a bath; where it is necessary in the new and growing portions of the city to leave a spigot turned on at night in order to get sufficient water for the morning breakfast. More than that, you know the situation that developed immediately after the earthquake. San Francisco attempted to supplement her fresh-water supply with a salt-water supply drawn from the ocean—an emergency supply in case of fire.

There is every kind of reason why San Francisco should have a larger supply of water than she has. At the present time they are advertising in the papers that people must stop washing down their steps, washing off the sidewalks, and watering their lawns, because the water is not to be had. * * *

The Hetch Hetchy Valley is distant from the Yosemite Valley and in no way touches that beautiful scenic valley. The Hetch Hetchy Valley I have never seen; but it is a valley in a canyon which is partly submerged during a part of the year, which, as I learned 10 years or more ago, was for the greater part even of the summer season an impossibility for camping purposes because of the mosquitoes there, there being so much swamp. Great cliffs arise around it. * * * I think that I have as much appreciation of natural beauty as anyone, and as much of a desire to conserve the

natural beauties of my own home State as anyone, and my conclusion, after thinking of this thing a long while, has been that to turn that valley into a lake would add to the beauty of the whole thing rather than to detract from it in any way. * * *

Both the private engineers and the War engineers have reached the conclusion that this dam site must eventually be used. California needs water for other than municipal purposes, for irrigation purposes, and she needs this water that comes down from these high mountains for power, because she has no coal, so that it is probably a matter of but a few years, even if this application were denied, and if this bill should fail to pass, *it would be only a very few years before you would find yourselves pressed by the State of California or by private parties with large public influence behind them to set aside this identical site as a dam site for the holding back of the flood waters which run to waste*, so that those waters might be used for irrigation purposes and for power purposes, if not for municipal purposes; and it has seemed to me, in looking over the whole situation, that San Francisco's demand or request made to the Secretary of the Interior in times past was a perfectly reasonable one. My concern as Secretary of the Interior has been to see that the interests of the Government were protected. I have looked over this bill, and in the very brief time I have had it seems to meet a great many of the objections that have been heretofore raised to such bills. * * *

My judgment is unequivocally in favor of the use of the floor of the valley. If San Francisco does not get it, some one else must; it is too precious a reservoir site to remain unused.

In building this dam San Francisco will necessarily build roads which will make the high sierra accessible—will make that whole portion of the park accessible to hundreds of thousands of people who never will have any chance to go in there if it remains as at present. *Therefore it seems to me that as a park proposition alone this thing is worth while.* * * *

I think, as one having charge of the park, that it will be beneficial, and that anyone who really knows the country and appreciates the advantages that will come by the opening up of it and making it accessible and putting it to use must indorse this proposition as against some rather doubtful esthetic consideration.

San Francisco has absolutely needed an additional water supply for years.

I am advised by the irrigation people themselves that they are satisfied that this (bill) protects their rights, and I think it becomes quite evident when you consider that the city puts up a great dam which will hold back flood waters that run idly by their land, that it must work out for their benefit if they have any right whatever to the use of the waters.

The general principle of the bill is that these lands belong to the Federal Government and that we have control of them. The water originates in them, the water flows through them, and we have control over the dam site, and if we are to allow these lands to be submerged we have got the right to make certain conditions. Certainly no one can come in and use lands in a national park without our consent, and if you give consent you have got the right to make conditions.

I think the rights of the irrigation districts are very well protected here, and that they have the right to call upon the city for additional water.

I think that it is very proper that the Federal Government should use whatever power it has over the public lands, over the parks, and over the forests, to compel the fullest use of these waters, and indirectly to require through its power to make conditions, the lowest possible rate for consumers.

In my judgment, the permission desired by San Francisco to secure water from the Yosemite National Park for municipal purposes, etc., should be accorded. The communities on San Francisco Bay constitute the largest center of population on the Pacific coast and are urgently in need of an adequate supply of pure, wholesome water for domestic consumption and for fire protection.

This project would insure the development of a dependable supply of water for the use of the adjacent irrigation district, and it would also provide for the development of power now going to waste. The city of San Francisco has evidenced its good faith in this matter by providing a large bond issue looking to securing money to effectuate

the grant if accorded. The bill under consideration fully protects the interests of the United States in the park and elsewhere. Under the project as proposed by the city, the floor of the Hetch Hetchy Valley, now difficult of access and frequently unhealthy, will be converted into a lake of great beauty and be provided with suitable approaches. Under the provisions of this bill the revenues derived by the Government, which in time will grow into a very considerable sum, are to be used for the maintenance and improvement of the Yosemite National Park, and the city of San Francisco has undertaken to construct and maintain roads, trails, and bridges which will practically result in a great enlargement of the park areas of the high Sierra by making them more safely and easily accessible.

HOUSTON APPROVES.

[Extracts from statement of Hon. David F. Houston, Secretary of Agriculture, before the Public Lands Committee, House of Representatives, June 25, 1913.]

I have examined this proposed bill, and I am in hearty accord with what the Secretary of the Interior says as to the general features. So far as the Department of Agriculture is concerned, I think that all of the interests of the Government are safeguarded in the bill.

* * * * *

It is unnecessary for me to repeat anything that has been said about the need of the city of San Francisco for water. There is no doubt, from the representations made, that they have a great and growing need for this water supply. It is a prerequisite to the development of a great city. Now, I am also informed that this has been determined as the best way to secure the additional water required. It seems to me that we can not afford to stand in the way of that. * * * I have carefully examined the bill, and I can see no reason why it should not go through.

The CHAIRMAN. In your opinion the development of roads and trails might mean an additional protection to the forest, might it not?

Secretary HOUSTON. Yes, sir.

The CHAIRMAN. Have you considered the matter from the point of view of the people who may think it is a great wrong to put this water to beneficial use because of the possible injury to the natural beauties of the valley or because of the destruction of scenic values?

Secretary HOUSTON. In the first place, if I am correctly informed, it will add to the beauty rather than injure the appearance of the forest and the park. So that answers the question from that point of view. *But I think there is a great deal of beauty in San Francisco to be conserved, and I think that the thousands of people there have some claims upon the Government.* * * *

PINCHOT INDORSES BILL.

[Extracts from statement of Hon. Gifford Pinchot, former Chief Forester, before Public Lands Committee, House of Representatives, June 25, 1913.]

We come now face to face with the perfectly clean question of what is the best use to which this water that flows out of the Sierras can be put. As we all know, there is no use of water that is higher than the domestic use. Then, if there is, as the engineers tell us, no other source of supply that is anything like so reasonably available as this one, if this is the best and within reasonable limits of cost, the only means of supplying San Francisco with water, we come straight to the question of whether the advantage of leaving this valley in a state of nature is greater than the advantage of using it for the benefit of the city of San Francisco.

Now, the fundamental principle of the whole conservation policy is that of use—to take every part of the land and its resources and put it to that use in which it will best serve the most people—and I think there can be no question at all but that in this case we have an instance in which all weighty considerations demand the passage of the bill. * * * The construction of roads, trails, and telephone systems which will follow the passage of this bill will be a very important help in the park and forest reserves. The national forest telephone system and the roads and trails to which this bill will lead will form an important additional help in fighting fire in the forest reserves. As has already been set forth by the two Secretaries, the presence of these additional means of communication will mean that the national forest and the national park will be visited by very large numbers of people who can not visit them now. I think that the men who assert that it is better to leave a piece of natural scenery in its natural condition have rather the better of the argument, and I believe that if we had nothing else to consider then the delight of the few men and women who would

yearly go into the Hetch Hetchy Valley, then it should be left in its natural condition. But the considerations on the other side of the question, to my mind, are simply overwhelming, and so much so that I have never been able to see that there was any reasonable argument against the use of this water supply by the city of San Francisco, provided the bill was a reasonable bill. * * * The (sanitary) regulations which are required are substantially what ought to be followed by any well-intentioned camper. * * *

In a colloquy with Hon. John E. Raker, member of Public Lands Committee, Mr. Pinchot discussed the effect of the construction of roads and dam site in the Hetch Hetchy Valley. He agreed with Mr. Raker that this work would make the valley more accessible and that the use of the park would be enormously increased. Mr. Pinchot, in reply to a question by Mr. Raker, said he had never been able to agree with John Muir in the latter's attitude toward the Sierras.

Mr. Pinchot unequivocally indorsed the bill, and said there was no reason to delay its passage, as every possible phase of the subject had been investigated and discussed for 10 or 12 years. He said:

I am thoroughly and heartily in favor of it. I am in favor of reporting the bill now before the committee and passing it at this session.

GEOLOGICAL SURVEY CHIEF FAVORS BILL.

[Extracts from statement of Dr. George Otis Smith, Director of U. S. Geological Survey, before Committee on the Public Lands, House of Representatives, June 25, 1913.]

The Hetch Hetchy Valley must eventually be made into a reservoir. Now, I believe that the sooner that dam site is actually used, the sooner that reservoir is utilized, the better. * * * There are three parties, it seems to me, to this proposition. San Francisco, by reason of its claim for the highest use of the water; the Turlock-Modesto irrigation districts, by reason of their prior use and their actual dependence upon the Tuolumne watershed for their water; and, thirdly, the general public, which is interested in the full utilization of our water resources here, as elsewhere, and also interested by reason of special rights which they have in the national parks. I believe that the citizens of San Francisco and the other bay cities will receive pure water from the cheapest source, and they will also receive municipal power at a lower price. The irrigation interests, with their prior rights, are assured under the terms of this bill of a larger supply than they at present have upon what seems to me to be absolutely equitable terms. The third party to this contract, in the form of legislation, is the general public. The visitors to the park, if this plan is carried out, will have the northern part of the Yosemite National Park made more accessible, if not indeed also more attractive. And right there I would say that in my opinion natural beauty has little value unless there is the human eye to see it.

The sanitary restrictions in the bill are not a bit more than should be placed upon any users of a national park, this and other national parks, whether San Francisco is to get the water from the park or not. In addition, this is necessary in order to protect the campers from themselves. * * *

To sum up, the proposed legislation appears to me to serve present needs without in the least compromising future needs. If we look ahead, there is also in this project some future possibilities of general benefit to the public, and not the least of these benefits will be the increased degree in which these national playgrounds of the high Sierra will be made more attractive to the general public because they will be more accessible.

I base my opinions on actual observation of the Hetch Hetchy Valley itself.

I do not think that anyone else (than San Francisco) is liable to develop the Hetch Hetchy dam site, unless there is a reasonable hope that the irrigation use can be connected with the municipal and power use.

No extensive argument is needed to show that the full utilization of the Tuolumne River is not only desirable but absolutely essential.

CHIEF FORESTER O. K'S PLAN.

[Substance of statement of Hon. Henry S. Graves, chief forester, before Public Lands Committee, House of Representatives, June 25, 1913.]

Mr. Graves analyzed the bill before the Committee on the Public Lands so far as it relates to the jurisdiction of the Forest Service. He approved the provisions and said that the telephones, trails, roads, etc., would materially assist in the proper conduct of the Stanislaus National Forest, and would result in good for all concerned. As to the bill itself, Mr. Graves said he had assisted in the preparation of Secretary Lane's report, which represented the agreed policy of the department, including the Forest Service.

NEWELL WANTS DAM BUILT.

[Extracts from statement of Hon. F. H. Newell, chairman United States Reclamation Commission, before Public Lands Committee, House of Representatives, June 25, 1913.]

I agree fully with what has been stated by the representatives of the departments in this particular case. I made a study of the water supply of the higher Sierras 18 years ago. I made this study in the Hetch Hetchy Valley as well as in the surrounding area. It was found then that the irrigation development of the valley (San Joaquin) would require the building of a reservoir in that place. At that time we did not anticipate the needs of the city of San Francisco, and in fact gave that no consideration; but we are now fully aware that the ultimate development of the city of San Francisco will require the use of this reservoir site. Now, touching the question of the destruction of the natural beauty of the valley, I will say that, having been concerned with the building of many large reservoirs, I have naturally come to believe that there is nothing more beautiful than a well-built dam with a reservoir behind it. * * *

Those of us who have been handling this water-supply question feel that the municipal or domestic use is so far superior to any other use that it does not enter my mind that there can be any competition. * * * You can supply, perhaps, one hundred times as many people with water for domestic use in a city as could be supplied for irrigation purposes.

Mr. Newell discussed at great length with the members of the committee the cost of water for irrigation and the reasonable investment that should be made by landowners. He stated that in his opinion no encouragement could be held out to irrigationists that the Government would build a reservoir at Hetch Hetchy, the water to be used for irrigation purposes. In his opinion the construction by San Francisco of the Hetch Hetchy Dam would materially benefit the irrigationists and promote conservation. He approved the passage of the bill.

ARMY BOARD TELLS COMMITTEE BILL SHOULD PASS.

Extracts from statement of Col. John Biddle, chairman of the Board of Army Engineers which investigated and reported upon the San Francisco water problem, before the Public Lands Committee, House of Representatives, June 26, 1913.]

Responding to Chairman Ferris, Col. Biddle stated that he was stationed in San Francisco from 1907 to 1911 and was in general charge of the rivers of California, and in that way became familiar, to a certain extent, with them, and also with the water situation in California. He further stated that the Army board was appointed in 1910 while he was stationed in California, and the other members of the board went out there. In 1911 the board went over several of the important sources of supply, and in 1912 the board again went out there and went over a number of these sources. In addition, Col. Biddle said that he had personally seen most of the sources in question.

Following are quotations from testimony of Col. Biddle:

The city of San Francisco obtains its water supply at present from sources all within about 50 miles of the city. It has been recognized for some years past that these sources were insufficient and therefore San Francisco has been investigating supplies from other points. Early investigation convinced the engineers employed by the city that the most economical supply was from the upper Tuolumne River, making use of two main reservoir sites, Lake Eleanor and Hetch Hetchy Valley, lying within the Yosemite National Park. * * *

Col. Biddle recited the appointment of the Board of Army Engineers, and stated that two inspections of the reservoirs in the Yosemite Valley and other proposed sites were made, and also that very comprehensive inspections of the available sites were made. In addition, Mr. H. H. Wadsworth, assistant engineer, United States Engineer Service, was secured by the board to make further investigations and examinations. Mr. Wadsworth had been in the employ of the engineer department in California and is familiar with the rivers and reservoir sites in central California. Mr. Wadsworth spent about a year and a half on duty in connection with the work of the Army board.

Resuming, Col. Biddle says:

While the city of San Francisco makes the application, the other cities on the bay are also vitally interested, as in most cases the water supply in those communities is nearing its limit of development, and the more important ones have already taken such steps as seem desirable to join San Francisco in obtaining a new water supply.

* * * * *
The board took into consideration all possible sources of water supply.
* * * * *

The Hetch Hetchy supply is estimated to cost \$77,000,000 spread over a number of years. The second and third sources are estimated to cost from \$97,000,000 to \$99,000,000.

The data and analysis of these projects appear in the Army board report (H. Doc. No. 54) and also in the hearings before the Public Lands Committee, beginning at p. 50. Reference to these reports and hearings is hereby made.

Resuming extracts from the hearings:

MR. TAYLOR of Colorado. If you know any reason why we should pass this bill, tell us that reason.

COL. BIDDLE. The reason why you should is that San Francisco has to have the water; that it is a perfectly practicable way, and by far the most economical way. * * *
The power development in the Hetch Hetchy is greater than it is at any other source of supply.

Col. Biddle then analyzed the possible alternative sources, which analysis is to be found in the printed hearings, page 56 et seq. He said that all these alternative sources were much more expensive and presented greater engineering difficulties than the Hetch Hetchy. He stated further that, in his judgment, San Francisco would meet opposition from the irrigationists and others if other sources were selected. Further, Col. Biddle stated that it would take San Francisco longer to obtain water rights in other systems, whereas the city now owns the water rights in the Hetch Hetchy. He also stated that the city owns the greater part of the floor of the Hetch Hetchy Valley and a small part of the dam site.

Resuming extracts:

THE CHAIRMAN. Are you acquainted with the sentiment of the people of San Francisco touching the supply they desire?

COL. BIDDLE. Yes, sir; the sentiment is overwhelmingly in favor of the Hetch Hetchy supply.

The CHAIRMAN. There can be no question about that?

Col. BIDDLE. None whatever.

* * * * *

Col. BIDDLE. There is no question in my mind that the Hetch Hetchy is the best water supply for San Francisco, and that it is the most economical that can be obtained; it can be obtained more promptly, and is better in every way * * *.

The CHAIRMAN. With the information before you, coupled with the results of these two investigations, if you were a member of this committee, having due regard for the rights of the irrigation people, and having due regard for the rights of the nature lovers, who believe that you should not interfere with the Yosemite National Park, and having due regard for the needs of San Francisco, which system would you vote for?

Col. BIDDLE. I would vote for the Hetch Hetchy system.

The CHAIRMAN. You would vote for the Hetch Hetchy system?

Col. BIDDLE. Yes, sir.

The CHAIRMAN. Would you feel, in casting a vote of that kind, that you had inflicted a greater wrong upon the irrigation people and the nature lovers than if you voted for one of the other systems?

Col. BIDDLE. No, sir; so far as the nature lovers are concerned, my own preference is for a valley, for the reason that the Sierras are full of beautiful lakes. While there are, of course, a number of valleys, there are very few like the Hetch Hetchy. There are very few in the whole Sierras; still it would be very beautiful as a lake. The difference between the Yosemite Valley and the Hetch Hetchy, in my opinion, is that the Yosemite is far grander than the Hetch Hetchy, but the floor of the Hetch Hetchy is more attractive. The cliffs and waterfalls of that valley are wonderful, and would not be injured by the creation of a lake. So, with this lake you would still have a wonderful piece of scenery. Then, of course, the facilities that the city would give would afford more people an opportunity to visit the valley.

* * * * *

I think the city of San Francisco is agreeing to do a very reasonable thing and that the roads and trails required will satisfy the demand.

The CHAIRMAN. As matters now stand, it would be pretty extravagant for poor people to undertake to go there?

Col. BIDDLE. It is impossible for them to go in there, unless they go in with knapsacks on their backs. In the early summer the mosquitoes are very bad, and in the late summer it is too hot in the Hetch Hetchy Valley.

Col. Biddle stated that the Hetch Hetchy Lake would be 6 or 7 miles long by $1\frac{1}{2}$ miles wide, and would flood an area of approximately 1,100 acres.

Col. Biddle also stated that the proposed sanitary regulations "are such as should be made anyhow, if the park is to be used by any large number of people." Answering a question on this subject, Col. Biddle added:

I think that as soon as the park begins to be used to any extent it will be necessary to have the same rules for the protection of campers as for the protection of the people of San Francisco.

Discussing necessity for a long look ahead in California, on account of the general lack of water, Col. Biddle said:

Cities situated as San Francisco have to look a long time forward. Here at Washington, for instance, you have the Potomac River, and the chances are that the water situation, so far as Washington is concerned, 50 years hence will be the same as it is to-day. In the case of San Francisco, however, there will be danger of so many water rights and water use developments that it might be almost impossible 50 years from now to obtain water rights without great expense and even hardship to agricultural communities. That is the reason we take that advanced date.

Responding to the chairman, the other members of the Army board expressed their views:

Col. COSBY. I concur fully in the statement of Col. Biddle. There is only one small point of difference, and that is as to whether the Hetch Hetchy Valley would be more attractive with this reservoir in it than in its present condition. *I believe that with the lake it would be even more beautiful than it is in its natural condition.*

TAYLOR AND COSBY INDORSEMENTS.

Col. TAYLOR. There is not the slightest question in my mind but that this should be used as the source of water supply, and not only that, but that it will be used as a water supply in a very short time independently of whether this project is adopted or not. I think that the pressure will be so great to conserve the water up there that it will be used as a storage reservoir. It is by far the best storage reservoir in that section of the country, and water is so valuable up there that they can not afford to let it run to waste. If you deny the use of it to San Francisco, sooner or later the water will be put to other uses. Somebody will be asking for permission to utilize the Hetch Hetchy Valley as a storage reservoir for irrigation purposes. This water will certainly be used for the city of San Francisco or for irrigation purposes.

Col. COSBY. I presume the members of the committee fully understand how inaccessible the Hetch Hetchy Valley is. I think the roads will make it accessible to a greater number of people. At the present time I think that there are practically only two classes of people who use it, people who are unusually wealthy, or people who are unusually strong and healthy and are able to make the trip.

CITY'S POINT OF VIEW.

[Extract from statement of Hon. James D. Phelan, former mayor of San Francisco, and representative of Mayor James Rolph, jr., and the city of San Francisco.]

I will emphasize the fact that the needs of San Francisco are pressing and urgent. A large number of our population has been lost to Oakland, Alameda, and Berkeley by reason of the fact that we have never had adequate facilities, either of transportation or of water supply. So San Francisco, the chief Federal city on the Pacific coast, asks the Federal Government for assistance in this matter by grant and not by money. It has obligated itself to pay \$70,000,000 for a water supply. We have endeavored to satisfy the needs of the irrigationists in good faith, as well as the local water monopoly, and we come this year to Washington, I think, with the good will of those heretofore opposed to us, possibly with the exception of the gentlemen who are devoted to the preservation of the beauties of nature.

As Californians, we rather resent gentlemen from different parts of the country outside of California telling us that we are invading the beautiful natural resources of the State or in any way marring or detracting from them. We have a greater pride than they in the beauties of California—in the valleys, in the big trees, in the rivers, and in the high mountains. We have the highest mountain in the United States in California, Mount Whitney, 15,000 feet above the sea, as we have the lowest land, in Death Valley, 300 feet below the sea. We have the highest tree known in the world, and the oldest tree. Its history goes back 2,000 years, I believe, judged by the internal evidences; as we have the youngest tree in the world, Luther Burbank's plumcot.

All of this is of tremendous pride, and even for a water supply we would not injure the great resources which have made our State the playground of the world. By constructing a dam at this very narrow gorge in the Hetch Hetchy Valley we create not a reservoir but a lake, because Mr. Freeman has shown that by planting trees or vines over the dam the idea of a dam, the appearance of a dam, is entirely lost; so coming upon it it will look like an emerald gem in the mountains; and one of the very few things in which California is deficient, especially in the Sierra, is lakes, and in this way we will contribute, in a large measure, to the scenic grandeur and beauty of California. I suppose nature lovers, suspecting a dam there not made by the Creator will think it of no value, in their estimation, but I submit man can imitate the Creator—a worthy exemplar. I remember the story of John Hay's "Little Breeches," which describes the old fellow who, believing in nothing that was religious or good, and having been told, after his child recovered, that he had wandered away in the woods and must have been restored by the angels, said:

To restore the life of a little child
And bring him back to his own,
Is a darned sight better business
Than loafing 'round the throne.

To provide for the little children, men, and women of the 800,000 population who swarm the shores of San Francisco Bay is a matter of much greater importance than encouraging the few who, in solitary loneliness, will sit on the peak of the Sierra loafing around the throne of the God of Nature and singing his praise. A benign father loves his children above all things. There is no comparison between the

highest use of water—the domestic supply—and the mere scenic value of the mountains. When you decide that affirmatively, as you must, and then on top of that, that we are not detracting from the scenic value of the mountains, but enhancing it, I think there is nothing left to be said.

All the Members of Congress from California were favorable to the grant to San Francisco under the provisions of the bill.

A written statement for the Turlock and Modesto Irrigation Districts was presented by the authorized representatives of said water district, which approved the bill as drafted and reserved the right to object should the conditions relating to those irrigation districts be eliminated or materially modified.

MR. WHITMAN'S VIEWS.

Mr. Edmund A. Whitman, of Boston, Mass., president of the Society for the Preservation of National Parks, presented his views to the committee.

Mr. Whitman, in response to interrogations of the chairman of the Land Committee, said that the society he represented was composed of approximately 200 members, and that not more than 25 of these members had ever visited the Hetch Hetchy.

ROUGHEST COUNTRY IN THE WORLD.

Describing the Hetch Hetchy Valley, Mr. Whitman says (p. 206):

It is some of the roughest country that God ever made. You do get little places here and there where there is grass and water, but the large part of the country is the roughest sort of country, where camping is as impossible as it would be on the top of this table. * * * The Hetch Hetchy Valley—the floor is perfectly level and grass-covered. The floor is two or three miles long and nearly half a mile wide. That is surrounded by steep cliffs, where there are gorges, out of which one may toilsomely climb to stopping places, * * * where a few people go and camp for a short time, * * * and it would take a strong man four days to go through those 20 miles of canyon, because it is so rough. Those who are not so strong would go as we went, over the mountain side, just above the Hetch Hetchy Valley. I HAVE GONE OUT FROM THE TOP OF THE MOUNTAIN THERE AND DANGLED MY FEET DOWN INTO SCENERY FROM A POSITION WHERE I COULD LOOK DOWN 5,000 FEET TO THE RIVER BELOW AND ACROSS TO THE OTHER BANK A DISTANCE OF SOME TEN OR TWELVE THOUSAND FEET. * * * There is no other place like it on the face of the globe.

THE BLUE LAKES.

Mr. Eugene J. Sullivan, president of the Sierra Blue Lakes Water & Power Co., appeared before the committee. For several years Mr. Sullivan and his associates have been opposing the Hetch Hetchy water system and attempting to sell to the city of San Francisco the Blue Lakes system. The fact that Mr. Sullivan and his company have nothing to sell which is of value to San Francisco has not deterred this gentleman from traducing the board of Army engineers and the city officials of San Francisco.

When announcement that the Land Committee of the House was to hold hearings on the Hetch Hetchy bill was published in San Francisco, Mr. Sullivan and his engineer, Taggart Aston, sent numerous telegrams to Members of Congress demanding delay and charging

that a "great national scandal" would follow if action was had upon the bill. Coupled with this was a charge that the city engineer of San Francisco had suppressed data and maps which showed the Sierra Blue Lakes project to be preferable and better than the Hetch Hetchy system.

To give Mr. Sullivan a chance to make good, the Public Lands Committee took a recess of more than a week to allow him to come and make his presentation. His statement occupies 91 pages of the printed hearings, Part II.

San Francisco's engineers investigated the Sullivan project and rejected it. The Board of Army Engineers and Mr. H. H. Wadsworth, the civilian engineer of the board, also investigated the Sullivan project, and reported adversely thereon. (See Army board report (H. Doc. 54, 63d Cong., 1st sess.)) Mr. Sullivan informed the Land Committee that Taggart Aston, his engineer, is employed on a 10 per cent contingent fee—Aston's compensation depending upon the sale of the Blue Lakes project.

Mr. Sullivan repeatedly charges that a report by Bartel, one of a hundred assistant city engineers, was suppressed. In refutation of this, members of the Army board say they personally visited the watershed which Mr. Sullivan claims to own, and further they had conferences with Bartel and the latter's superiors while the board was investigating various water-supply systems in California.

COL. BIDDLE REPORTS ON BLUE LAKES.

In the absence of Chairman Ferris, Hon. William Kent, member of the committee, sent to the members of Army board the transcript of Mr. Sullivan's testimony. Col. Biddle, chairman of the board, replies as follows:

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, July 31, 1913.

MY DEAR MR. KENT: Having reference to your communication of July 21, asking for comment from the Board of Army Engineers on the testimony of Mr. E. J. Sullivan, representing the Sierra Blue Lakes water project on the Mokelumne River, proof sheets of which testimony were sent by you, the following is submitted by the whole board:

The two main questions raised by Mr. Sullivan appear to be—first, whether San Francisco needs water from the Sierras at all, and second, whether the Mokelumne River is not the best and cheapest source of such a supply.

According to the estimates made by the board, the amount of water now used by the communities surrounding San Francisco Bay is 133,000,000 gallons daily. It is estimated that by the year 2000, 540,000,000 gallons daily will be needed. The board believes that about 100,000,000 gallons daily additional can be economically developed from near-by sources and that for the remainder it will be necessary to go to some outside source, such as the Sierras. The city of San Francisco in its estimates provides for obtaining 400,000,000 gallons daily from the Sierra sources, partly because of the doubt of the city engineers that the near by sources can be developed to the amount above estimated, and partly because the full amount could be used to advantage. There can be no question, however, but that from 300,000,000 to 400,000,000 gallons daily additional will be needed by the year 2000, and on account of the situation in California, where all of the available water will be eventually used for irrigation or power, it is most desirable for San Francisco and the other cities to establish now their rights.

NO SUPPRESSION OF DATA.

As to the Mokelumne River, it is stated in the testimony of Mr. Sullivan that Gen. G. H. Mendell, Corps of Engineers, reported favorably on the Mokelumne River as a source of supply. This report was dated about 1877, and provided for only 25,000,000 gallons daily, so that, of course, it has no bearing on the present investigation. Mr.

Sullivan makes as his principal point the fact that a report by Mr. Bartell, assistant city engineer, in April, 1912, was never submitted to the board of Army engineers, and that if this report had been submitted the conclusion of the board would have been very different. This report was not seen by the board. *The board, however, attaches no importance to this fact. The assistant engineer in the employ of the board, Mr. H. H. Wadsworth, has written that he had several conversations with Mr. Bartell on the subject and was generally familiar with considerable, at least, of the data obtained by him and his deductions therefrom. The main point, however, is that the board itself had such independent examinations and investigations made of the Mokelumne, as well as other streams, as seemed necessary in order for the board to form its opinion on this source of supply. Mr. Bartell's report could not have changed the facts thus ascertained. The report of the chief engineer of the company was in the hands of the board.*

In determining the supply of water that can be obtained from any of the Sierra sources there are two main considerations: First, the amount of water that flows down the stream; and, second, the reservoir capacity for storage of water during the dry seasons of the year and especially during dry years, which frequently occur in California.

The method of determining the flow of any river, such as the Mokelumne, is to measure the flow at such points and at such times as may be practicable and to have the record of the rainfall from which the run-off may be deduced. The records of rainfall and run-off are not very complete or continuous for any length of time on these Sierra rivers. Some have been made by the State of California, some in recent years by the United States, and others to a certain extent by corporations or individuals. All these records, as far as known, were at the disposal of the board, and the board was therefore able to deduce with as much accuracy as anyone what is the total flow of the Mokelumne.

RESERVOIRS TOO COSTLY AND INFERIOR.

As to the reservoirs, the assistant engineer of the board made personal examinations and reconnaissances of the three principal reservoir sites—namely, North Fork of Mokelumne, Railroad Flat, and Forest Creek—and directed special surveys to be made of the two largest ones by the city of San Francisco, which was done. The board itself inspected one of the two main reservoir sites, the Railroad Flat, for the special reason that the use of this reservoir was considered of doubtful value on account of its cost. One of the reservoirs specially mentioned by Mr. Sullivan is the Blue Lakes. This reservoir is, however, of little value, as the catchment area is only $4\frac{1}{2}$ square miles, and therefore but little water will flow into it.

Furthermore, investigations by the Geological Survey in the last few years have indicated that the reservoir capacity on this watershed outside of the few mentioned is very small. The reservoirs on the Mokelumne are very inferior to those on the Tuolumne. For instance, with a dam somewhat over 300 feet in height, the amount of masonry in the dam at Hetch Hetchy is less than 5 cubic yards for each million gallons stored, while for the main reservoir on the Mokelumne, on the north fork, it is 23 cubic yards and that at the Railroad Flat Reservoir but little less. The capacity of the Hetch Hetchy Reservoir with a 300-foot dam is about 120,000,000,000 gallons; that at the north fork of the Mokelumne about 28,000,000,000 gallons; the Railroad Flat Reservoir about 21,500,000,000 gallons. It is therefore very evident that the relative cost of the reservoirs on the Mokelumne River is much greater than at Hetch Hetchy Valley.

The amount of land that could well be irrigated from the Mokelumne and the rights for power and irrigation were obtained by the board after such investigation as was possible and are believed to be correct. As stated, much of this land is not yet irrigated, but the tendency in that part of California is toward irrigation, and it is believed that in time it will be desired to irrigate much more land than at present. The amount assumed for irrigation is 200,000 acres, less than half of what is allowed for irrigation in the discussion of the supply from the Tuolumne River.

INADEQUATE SUPPLY OF WATER.

The board therefore believes that the estimate of 128,000,000 gallons daily is about all that could be counted on from the Mokelumne River unless the existing water rights be purchased at great expense and unless the land tributary to this river be perpetually deprived of water from this source for irrigation. Even if all the water from the Mokelumne could be used for San Francisco, it would not be sufficient on account of the relatively small reservoir capacity in this watershed and the impossibility of using reservoirs in other watersheds on account of the prohibited expense. In California the floods last but a short time; dry years occur along with the wet ones and large storage possibilities are imperative.

It does not appear from the testimony of Mr. Sullivan just where the large supply he estimates, 350,000,000 to 500,000,000 gallons daily, is to be obtained. It is thought possible that he may make use of some of the water falling on the foothills and lower. This, however, has not been considered allowable in making estimates on any of the supply from the Sierras, for the reason that these foothills are fast becoming more and more thickly inhabited and it was desired to obtain water from a source which lies above ordinary habitation.

ARMY BOARD GOT ITS OWN DATA.

To sum up, there is nothing in the testimony of Mr. Sullivan, and it is believed that there can be nothing in the report of Mr. Bartell, which would affect the conclusions of the board, for the reason, as stated above, that the board obtained, as far as was considered desirable, its own data, excepting that which was of a public nature and therefore available to the board. As to the relative cost of the projects, the report indicates that the Tuolumne supply is much the more economical. The distance over which Mokelumne River water would have to be transported is about the same as for the Tuolumne, and difficulties in construction of aqueduct are about the same, while the cost of the reservoirs is relatively very much greater. For the amount of water that is needed by the bay communities there can be no question but that the Tuolumne supply is more economical than any other and that the Mokelumne can be used only in connection with supplies from other sources, as it is not in itself sufficient.

FULL HEARING GIVEN COMPANY.

It might be added that the board gave to the Sierra Blue Lakes Water & Power Co. on July 5, 1911, a hearing, which was stenographically reported. At this hearing were present Messrs. E. J. Sullivan, president; C. M. Burleson, chief engineer; James N. Gillett and W. H. H. Hart, attorneys for the company. Every opportunity was given them to thoroughly present the project, and in addition, a report on this source of supply prepared by the chief engineer, Mr. C. M. Burleson, was submitted to the board.

Very respectfully,

JOHN BIDDLE,
*Colonel, General Staff, Chairman Board of Officers of
Corps of Engineers, United States Army.*

HON. WILLIAM KENT,
House of Representatives, Washington, D. C.

BRIEF OF THE CITY AND COUNTY OF SAN FRANCISCO.

Including a brief history of the Hetch Hetchy project to date and a résumé of the testimony and arguments adduced at the hearing before the Public Lands Committee of the House of Representatives.

To the honorable chairman and members of the Public Lands Committee of the House of Representatives the following brief and argument in support of the above-entitled bill is respectfully submitted.

GEOGRAPHICAL SITUATION.

For the benefit of those Members who are not wholly familiar with the relative geographical location of the cities, districts, and water sources affected by this bill the following brief statement is made:

The cities of San Francisco, Burlingame, San Mateo, Redwood, Palo Alto, Hayward, Alameda, Oakland, Piedmont, and Berkeley, which are to be organized into a municipal water district for development of the Hetch Hetchy water supply, form an almost continuous chain around the Bay of San Francisco. Their combined population at the present date is more than 700,000. Directly east of these bay cities the Coast Range Mountains form a low barrier between the bay cities and the San Joaquin Valley, one of the two great interior valleys of California. Through the middle of this valley the San Joaquin River flows north to the Carquinez Straits and thence into San Francisco Bay. On the east side of the valley the Sierra Nevada range rises, reaching heights of over 12,000 feet at the summit. Down the western slopes of the Sierras the Tuolumne River winds in a general westerly direction to its confluence with the San Joaquin River. For the purpose of irrigating during the

dry season the part of the valley floor which is normally drained by the Tuolumne River, the Modesto and Turlock irrigation districts were formed, comprising 257,000 acres in extent. Conjointly they have built the La Grange diverting dam at the point where the Tuolumne leaves the foothills on its westward course, and divert its waters through irrigating canals to the extent of their needs. About 50 miles farther up the Tuolumne and about 165 miles due east from San Francisco the river flows through the Hetch Hetchy Valley, which lies within the boundaries of the Yosemite National Park, about 25 miles north of the Yosemite Valley and on an entirely different watershed. The valley floor is about 3,530 feet in elevation. To the north of Hetch Hetchy and about 9 miles distant lies Lake Eleanor, one of the numerous mountain lakes of the Sierras. A short distance west of Lake Eleanor the ground falls off into Cherry Valley, through which the Cherry River flows to join the Tuolumne about 12 miles below the Hetch Hetchy Valley. The relative positions of the foregoing points will more readily appear from the map on file with your committee.

HISTORICAL SUMMARY.

(See statement of Percy V. Long, transcript,¹ p. 94.)

The city of San Francisco is now, and for many years past has obtained its water supply from the Spring Valley Water Co., whose reservoirs and sources of supply are situated in the adjoining Coast Range Mountains. As much as 12 years ago it became apparent to the municipal authorities that the supply afforded by the company was becoming inadequate for the city's needs. Requests from outlying districts for water extensions were being met by refusals from the water company, owing to its inability to properly supply a larger number of consumers. In 1901 the city engineer was ordered to and did make an investigation of various possible sources. Out of 14 sources then considered feasible, the Tuolumne River was selected as being superior in quantity, quality, and accessibility to all the others. Appropriations were duly filed in the city's behalf in accordance with the law then in force. Application was forthwith made to the Secretary of the Interior for permits to impound the water at Hetch Hetchy and Lake Eleanor and conduct the same to the city. The application was denied; was renewed in 1905; and again denied. The great fire of 1906 caused a suspension in proceedings, and in 1907 the matter was again taken up before Secretary Garfield, who in 1908 issued a revocable permit requiring the construction of the Lake Eleanor Dam and full development of that source before anything could be done at Hetch Hetchy. Two serious objections presented themselves to procedure under this permit.

First, the Eleanor Dam was vastly more expensive to construct than the Hetch Hetchy Dam and impounded far less water. Every principle of economy dictated that the less expensive dam should be first built and the Lake Eleanor source developed later as a supplemental supply.

Second, bonds for construction issued on the basis of a revocable permit would be extremely difficult to sell.

Nevertheless the people of San Francisco proceeded in good faith to comply with the terms of the Garfield permit. They voted \$600,000 in bonds in 1909 to acquire lands near Lake Eleanor held in private ownership and \$45,000,000 in bonds in 1910 for construction purposes.

Then they were suddenly served with notice by Secretary Ballinger to show cause why their permit should not be revoked as to the Hetch Hetchy source. Hearings on this order were postponed by the department until the fall of 1912. In the meanwhile the city of San Francisco had engaged the services of John R. Freeman, one of the most eminent engineers in the country, to examine all available sources and particularly the Tuolumne source, with a view to determining which was best adapted to the city's needs and the proper method of development. Mr. Freeman, after a long and careful investigation made with the assistance of a corps of experts, unhesitatingly recommended the Tuolumne supply and insisted that the only proper course of development would be to use the Hetch Hetchy Valley first and the Lake Eleanor and Cherry Valley Reservoirs as adjuncts. Concurrently with the investigation by the city's experts a board of engineer officers of the United States Army made an independent study of the situation. Their conclusions were, in brief, that the Hetch Hetchy supply was the most economical for the city to use, being at least \$20,000,000 cheaper ultimately than any other available source. In addition the board states as a conclusion on page 50 of its report:

"The board further believes that there will be sufficient water if adequately stored and economically used to supply both the reasonable demand of the bay communities

¹ References to transcript are to the transcript of proceedings before the Public Lands Committee of the House of Representatives, June 25-July 7, 1913 (printed as a House document).

and the reasonable needs of the Turlock-Modesto irrigation district for the remainder of the century."

This report, together with Mr. Freeman's report as to sources of water supply for the bay communities and the city attorney's report as to the condition of titles on the Tuolumne, were before Secretary Fisher at the hearing held in November, 1912. At this hearing all parties, proponents and opponents of the plan, were present and the case was presented from every aspect. Secretary Fisher reached the conclusion that the matter could only be properly handled by Congress and continued it for that purpose into the present year. The bill before this committee is a counterpart of H. R. 6281 which has been favorably reported by the House Committee on Public Lands.

WHAT SAN FRANCISCO IS ASKING FOR.

In the bill presented for your consideration, the city of San Francisco has set forth the rights which Congress must grant before the city can proceed with this great project. These rights are, briefly, as follows:

1. The right to construct a dam at the mouth of Hetch Hetchy, Lake Eleanor, and Cherry Valley and to flood said valleys to the height of their respective dams.

2. Rights of way through the Yosemite National Park and Stanislaus National Forest for tunnels, aqueducts, and water conduits, also for telephone, telegraph, and power transmission lines, roads, and trails.

3. Necessary power-house sites and diverting or storage dam sites.

4. The right to take stone, earth, and other materials for construction purposes from the land covered by the rights of way and adjoining land.

The water which San Francisco has appropriated under the laws of California and expects to store and beneficially use by means of the above works is the storm water of the Tuolumne—the water which has been going to waste every year over the La Grange irrigation dam during the high-water months.

CONDITIONS TO WHICH SAN FRANCISCO CONSENTS.

In order that the Government and the public may be amply protected in the exercise of this grant, the bill proposes that all procedure thereunder shall be carefully regulated by the Secretary of the Interior. Maps are to be filed and approved before the city can proceed. Work is to be commenced within a reasonable time and prosecuted diligently. The usual charges are to be paid to the Government for timber taken and the bill fixes an annual rental to be paid the Government as compensation for the rights granted. Campers are to be restricted by only a few simple sanitary regulations, which are fully set forth and can never be amplified by the city. All regulations of the Department of the Interior and Bureau of Forestry shall be complied with by the city. The city is prohibited from ever selling to private corporations or individuals the right to sell water, thus protecting this grant from ever falling into the hands of speculators.

WHAT SAN FRANCISCO PROPOSES TO DO IN RETURN FOR THIS GRANT.

In return for this grant San Francisco proposes:

First. To adequately protect all existing irrigation rights to the waters of the Tuolumne with ample allowance for future requirements. This feature will be discussed more fully a little later.

Second. To build at its own expense a magnificent system of roads and trails which will make one of the most beautiful scenic parts of the Sierra, now reached only by tedious journeys afoot or on mule back, generally accessible to the public.

Third. To furnish stored water to the irrigationists over and above the amount to which they are now entitled at actual cost of storage, where the same can be spared from municipal use.

Fourth. To furnish electric power at cost to the Modesto and Turlock irrigation districts and to municipalities situated therein.

OBJECTIONS WHICH HAVE BEEN OFFERED TO GRANT.

In seeking the grant of rights necessary to the development of its Hetch Hetchy project, the city of San Francisco has endeavored to meet every objection interposed in a fair-minded way. Some of these objections which were made in good faith by people who conscientiously believed that the grant would infringe on their rights the city has silenced by conceding practically all that was asked. Other objections which have been made or instigated by persons who are actuated purely by a desire to sell other projects to the city San Francisco has been impelled to resist by force of logic.

At the hearing before the House Public Lands Committee these objections, offered by opponents to the bill, sifted down to a very few. We enumerate the more important ones:

1. That in using the Hetch Hetchy Valley as a reservoir site San Francisco will destroy a camper's paradise.

2. That the irrigation interests of the San Joaquin Valley are being insufficiently protected.

1. Taking up these objections seriatim, we find no justification for the first conclusion. It is true that if the grant is made the city will flood the floor of Hetch Hetchy Valley and destroy its availability as a camp site. But the valley floor is not particularly well adapted to camping purposes. Col. Biddle, of the Army board, in his testimony before the House committee (transcript, p. 65), says:

"The point is this: In the early summer the mosquitoes are bad and in the late summer it is too hot in the Hetch Hetchy Valley. It is about 3,000 or 4,000 feet in altitude and the people want to go up to 6,000 or 8,000 feet."

It is a well-known fact to those who have ever visited Hetch Hetchy that the mosquitoes make the valley almost uninhabitable in the early summer, it being even necessary to wear veils for protection. With the establishment of a permanent lake in the valley, this evil will disappear. Moreover, the best part of the land which is now used for camping purposes by the two or three hundred people that venture into the valley during the entire year now belongs to the city of San Francisco in fee simple (transcript, p. 145; see also p. 63), and campers could be excluded therefrom at present if the city were inclined to take such action.

On the other hand, in return for these camping grounds which can only be used by suffrage of the city and are only suitable for that purpose during about two months of each year, the city proposes to surrender other lands owned by it outside of the valley to the Government for camping purposes. We refer to the Tiltill Valley, containing 160 acres, situated about 3 miles northeast of Hetch Hetchy, the canyon ranch of 160 acres situated about 3 miles southwest of the valley, the Hog ranch, comprising 322.45 acres, about 8 miles southwest of the valley, and a considerable area of good camping land in the vicinity of Lake Eleanor. (Transcript, pp. 145-147.)

The board of Army engineers on page 51 of their report say:

"The construction of reservoirs, especially the Hetch Hetchy, will destroy a few camping grounds within the park. The construction of the proposed trails will, however, render accessible other parts of the park not now readily reached, and the number of camping places within the park is large."

2. The best answer to the cry heard from stray quarters that the irrigation interests are not being sufficiently protected is the attitude of the official representatives from those districts at Washington. The San Francisco representatives conferred with them as soon as the bill was introduced, with the result that as now amended the bill meets practically every demand they have made, and they have withdrawn the objections to it. The only substantial point the city has never conceded is the contention advanced that San Francisco should never be allowed to take one drop of water from the San Joaquin Valley watershed, because the valley might some day be able to use it. The city does not concede either the truth of the premise or the logic of the conclusion reached therefrom. Let us examine the figures and conclusions reached by the Army board.

On page 50 of their report the Army engineers find:

"That there will be sufficient water if adequately stored and economically used to supply both the reasonable demand of the bay communities and the reasonable needs of the Turlock-Modesto irrigation district for the remainder of this century."

The city of San Francisco in the proposed bill has conceded to the Modesto-Turlock irrigation district the full amount of flow of the Tuolumne to which they are legally entitled, viz, 2,350 second-feet; has allowed them to take for storage purposes during the two months of the year when the water is highest up to 4,000 second-feet of the daily flow; has agreed to sell them stored water from the city's reservoirs at cost whenever they need it; and has allowed them to increase their maximum irrigable area from 257,000 acres to 300,000 acres, so as to permit of their sharing their supply with the newly organized Waterford district. In addition to all this it has agreed to furnish both districts with hydroelectric power at absolute cost. Could anything be more equitable than this proposition? The Army board characterizes, on page 45 of its report, the proposition made by San Francisco to Secretary Fisher for protection of the irrigation districts as a "reasonable one." The present proposition goes further than that one. It is more than reasonable. It is distinctly generous, and has been so recognized by the representatives of the irrigationists, with the sole exception of those who believe San Francisco should never be allowed to use the Tuolumne watershed at all.

With reference, however, to certain telegrams which have been sent to Members of the House and Senate purporting to come from chambers of commerce of various San Joaquin Valley towns who are in nowise interested in or affected by this project, asking that the city be required to furnish them with hydroelectric power at cost as a condition of the grant, it is submitted that these requests are both unfair and impossible of fulfillment. In the first place, none of these towns have invested or ever will invest one dollar in this project; they are not asked for any concessions; their request is for a sheer gratuity which some of the more ingenious members of their councils doubtless thought that San Francisco could be compelled to give. In the second place it is extremely problematical whether after having developed the maximum power that can be derived under this project the city will ever be able to supply more than the needs of the bay cities and the Modesto-Turlock district. Under such circumstances it is contended that these demands are unwarranted and should not be granted.

POSSIBLE ALTERNATIVE SOURCES.

While the city's engineers and the Army board made independent investigations of all alternative sources of supply which gave any promise of availability, the only ones which by any course of development could be made adequate are the four enumerated on page 50 of the Army board's report and by Col. Biddle in his testimony before the House committee. (Transcript, p. 56.) These are: (1) The Eleanor-Cherry-Stanislaus-Mokelumne source, (2) the American-Cosumnes-Stanislaus-Mokelumne supply, (3) the McCloud River, (4) the Sacramento River. Very briefly we submit the fundamental and we believe insurmountable objections to each of these sources as compared with the Tuolumne.

(1-2) Each of the first two alternative projects is subject to the same objections as the Hetch Hetchy project in that they take water which some of the irrigationists have claimed will be ultimately needed for development of the San Joaquin Valley. As Hetch Hetchy is eliminated as a reservoir site, it is probable that the objections of the nature lovers would be removed, although Lake Eleanor is in the Yosemite Park. From the city's standpoint the great objection is the almost prohibitive increase in cost, coupled with a much smaller power yield. Whereas the total power development of the Hetch Hetchy project is 115,000 horsepower, the maximum yield from the first alternative source is but 95,000 horsepower and from the second alternative source but 62,000 horsepower. Owing to the necessity of purchasing outstanding water rights and building numerous dams either of these projects would cost at least \$20,000,000 more than the Hetch Hetchy, an increase which makes them practically impossible of acquisition without serious injury to San Francisco's credit. (Testimony Col. Biddle, transcript, pp. 56-59.)

(3) The McCloud River has been examined as an alternative source. This river rises at the foot of Mount Shasta and joins the Sacramento near its headwaters. While the river carries at present an ample supply of water of good quality, the following objections are deemed sufficient to preclude its adoption by San Francisco: First, its great distance from the city, over 250 miles; second, its waters will eventually be required for the irrigation of the Sacramento Valley (testimony Col. Biddle, transcript, pp. 60, 61); third, the prohibitive cost (testimony O'Shaughnessy, transcript, p. 150); fourth, the impracticability of developing any hydroelectric power from this source. The great length of aqueduct would involve nearly twice the initial outlay that is proposed for the conduct of water from the Hetch Hetchy source. It is a financial impossibility for San Francisco to undertake this project for many years to come, and she needs the water now.

(4) As a fourth alternative it has been proposed that the city pump water from the Sacramento River and filter it. This project contemplates the establishment of a pumping plant near Antioch, filtration reservoirs, and a conduit through which the water could be pumped to storage reservoirs. Even if it be conceded that the sentimental objection to the use for domestic purposes of water taken from a river into which the sewage of every valley town finds its way is without foundation and that filtration would make the water fit for use, a question which is by no means undisputed (see statement Mr. Newell, transcript, p. 49), there remain very serious objections to this source: First, the heavy operating cost of such a system; second, the impossibility of generating any power through its use; third, the probability that irrigation needs within the next century will withdraw so much water from the upper Sacramento that the high tides of the bay will mingle with the stream below Sacramento and render it unfit for use. (Testimony O'Shaughnessy, transcript, pp. 150, 151.) There are also engineering difficulties to be met with in both the McCloud and Sacramento projects, in that the water would have to be brought under the Carquinez Straits in the case of the McCloud source, and under San Francisco Bay from either source, to reach the

city, unless an exceedingly long and expensive detour were made to the east. We have the further serious question raised by Col. Biddle in his testimony before the House committee (transcript, p. 55) as to whether the withdrawal of large quantities of water from the Sacramento or its tributaries would not eventually impair the navigability of the river, a question which does not arise in the case of the San Joaquin, as it is not navigable above the city of Stockton anyway.

The foregoing are the principal objections raised to the only alternative sources which either the civil or Army engineers found would furnish an adequate supply of water under any degree of development. None of them is as satisfactory as the Hetch Hetchy source; they all entail a tremendously increased investment, and at least one of them—the Sacramento project—promises to become an ultimate failure if adopted.

CONGRESS HAS THE POWER TO IMPOSE THE CONDITIONS CONTAINED IN THIS GRANT.

The question has been raised at the hearing on this bill that Congress is exceeding its powers in imposing the conditions set forth in this grant. This idea doubtless arises from a mistaken apprehension that Congress is being asked to legislate upon matters which are distinctly within the jurisdiction of the State, under guise of inserting it as a condition in a grant. Such, however, is not the case. The United States in making this grant to the city of San Francisco is not acting in its governmental capacity or exercising governmental powers. It is acting purely as a landowner disposing of its domain upon such conditions as it sees fit to a grantee who accepts those conditions and is bound by them as a matter of contract, not as a matter of statutory regulation.

"The authority of Congress over the public lands is granted by section 3, Article IV, of the Constitution, which provides that 'the Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States.' In other words, Congress is the body to which is given the power to determine the conditions upon which the public lands shall be disposed of. The Nation is the owner and has made Congress the principal agent to dispose of its property." (*Butte City Water Co. v. Baker*, 196 U. S., 119, 126.)

Judge Lindley, in his work on Mines, section 80, speaks of the Federal Government as the "absolute owner" of the public lands, with the power to "sell or otherwise dispose of them absolutely or conditionally, and prescribe the terms and conditions under which private individuals might acquire permanent ownership or the right to temporary enjoyment."

In support of this contention are cited:

Gibson v. Chouteau (13 Wall., 92, 99), where the Supreme Court said:

"With respect to the public domain, the Constitution vests in Congress the power of disposition and of making all needful rules and regulations. That power is subject to no limitations. Congress has the absolute right to prescribe the times, the conditions, and the mode of transferring this property, or any part of it, and to designate the persons to whom the transfer shall be made. No State legislation can interfere with this right or embarrass its exercise."

United States v. Gratiot (14 Pet., 526, 527):

This case arose over the lease of a lead mine to the defendants. The lease contained a great many clauses fixing the terms of the lease and the royalties to be paid to the Government. In a suit brought by the United States on defendant's bond, a demurrer was interposed whether Congress had acted within its powers in authorizing the President to make such a contract. In upholding the validity of the contract and bond the Supreme Court said:

"The Constitution of the United States (Art. IV, sec. 3) provides, 'That Congress shall have the power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States.' The term 'territory' as here used is merely descriptive of one kind of property and is equivalent to the word 'lands.' And Congress has the same power over it as over any other property belonging to the United States; and this power is vested in Congress without limitation, and has been considered the foundation upon which the territorial governments rest."

Note the words "without limitations." The conditions may thus be imposed for the benefit of the whole country or any part thereof.

Black v. Elkhorn Mining Co. (163 U. S., 445, 448):

"Being the owner of the lands, the Government could of course impose its own terms upon which to grant any right, whether of possession or of purchase."

Light v. United States (220 U. S., 523):

This was a suit by the United States to enjoin the grazing of stock on public lands in breach of the regulations of the Department of Agriculture. The validity of

the regulations as being an infringement on State rights was attacked by the defendant. The Supreme Court held, after citing with approval *Butte City Water Co. v. Baker*, supra:

"The United States can prohibit absolutely or fix the terms on which its property may be used. * * * All the public lands of the Nation are held in trust for the people of the whole country. And it is not for the courts to say how that trust shall be administered. That is for Congress to determine. * * *

"These are rights incident to proprietorship, to say nothing of the power of the United States as a sovereign over the property belonging to it."

There can be no question but that the foregoing cases established the right of Congress to impose such conditions as it sees fit upon a public grant. In the bill now before Congress it is asked to grant to the city of San Francisco valuable reservoir sites. As a condition to such grant it has been thought best to provide for the future protection at San Francisco's expense of the natural scenery of the Yosemite Park in the vicinity of Hetch Hetchy Valley, and for the present and future irrigation needs of the San Joaquin Valley. If, in the mind of Congress, these conditions are wise, and it sees fit to enact this grant with such conditions attached, then in accepting the grant the city of San Francisco accepts the conditions and is bound by them as a matter of contract. If the city should ever attempt to repudiate the conditions its case would not be as strong even as that of a street railway company which accepted a franchise and later attempted to repudiate the conditions thereof on the ground that they were not within the powers of the municipality which granted it. The court held:

"Even though it might be held that the condition upon which the permit or license was granted to the defendant railway company was ultra vires, the city not having the power to impose it, nevertheless the ordinance having been accepted by the company with the condition attached, agreeing thereby to perform it, it became a valid contract between it and the city, the validity of which the defendant is now estopped to deny." (*Chicago General Ry. Co. v. Chicago*, 176 Ill., 253.)

PRECEDENTS.

A grant of this sort, with various conditions requiring affirmative performance by the grantee is far from being without precedent in congressional annals.

Congress has required a grantee of a permit to build a dam for water-power purposes to build fishways for protection of fish in the stream. (Act of June 21, 1906, 34 Stat., 386; act of Apr. 23, 1906, 34 Stat., 130.)

It has required the grantee in a similar permit to furnish to the Government light and power and electric current free of cost. (Act of Mar. 4, 1907, 34 Stat., 1288; act of Apr. 26, 1904, 33 Stat., 309; act of June 29, 1906, 34 Stat., 628.)

All power permits granted by the Forestry Department under authority of the act of 1901 are subject to payment of royalties to the Government by the permittee, and to various other terms and conditions.

On the authority of the foregoing cases and precedents, it is submitted that there can be no question as to the power of Congress to impose the conditions set forth in the Hetch Hetchy bill.

HETCH HETCHY AND THE CONSERVATION POLICY.

In the foregoing paragraphs we have attempted to review in a concise manner the different features of the bill now before Congress and to show briefly why each of the several conditions was inserted, and what it is expected to accomplish. In conclusion we desire to survey the measure as a whole and demonstrate that it is wholly in accord with the great policy of "conserving the natural resources," to which this administration is committed.

"Conserving the natural resources." What does this phrase mean? Does it mean to lock up our forests and power sites and mineral deposits until some future time, for the use of posterity, without regard for the needs of the present generation? Or does it mean to so regulate the development of these resources that they may be put to the greatest beneficial use, may yield the maximum economic return for all the people of all generations? We incline to the latter view as being that of the Nation's leaders to-day.

Applying the "conservation" policy as above interpreted to the Hetch Hetchy project, we have to consider three classes of people to be affected: (1) The population of the San Francisco Bay communities, present and future, who sorely need water for domestic purposes; (2) the population of the San Joaquin Valley, present and future, who have irrigation interests and prospects to be protected; (3) the

constantly growing number of people from all over the country who seek rest and recreation in the great Yosemite Park. How can the Hetch Hetchy Valley be developed so as to yield the maximum benefit, not to any one class of people, but to all classes? This has been the thought constantly in the minds of the legislators who have thus far considered it. The Secretary of the Interior, Secretary of Agriculture, Director of the Reclamation Service, Director of the Geological Survey, Hon. Gifford Pinchot, and Col. Biddle, president of the Board of Engineers, all examined the bill from this standpoint and testified before the House committee as to their approval of it in its present form. We quote briefly from their testimony given at the hearing before the Public Lands Committee of the House of Representatives. Secretary of the Interior Franklin K. Lane gives as his opinion (transcript, p. 21):

"In my judgment, the permission desired by the city and county of San Francisco to secure water from the Yosemite National Park for municipal purposes, etc., should be accorded. The communities on San Francisco Bay constitute the largest center of population on the Pacific coast and are urgently in need of an adequate supply of pure, wholesome water for domestic consumption and for fire protection."

Secretary of Agriculture Houston concurs (transcript, p. 22):

"I examined the first draft of the bill that I saw and have examined this proposed bill, and I am in hearty accord with what the Secretary of the Interior says as to the general features. So far as the Department of Agriculture is concerned, I think that all of the interests of the Government are safeguarded in the bill."

Director George Otis Smith, of the Geological Survey, stated to the House committee (transcript, p. 35):

"Hetch Hetchy Valley must eventually be made into a reservoir. Now, I believe it can be stated that the sooner that dam site is actually used—the sooner that reservoir is used—the better, under the plan as set forth in the provisions of this bill."

Mr. Henry S. Graves, Chief Forester, Department of Agriculture, expressed himself as thoroughly satisfied with the bill. (Transcript, p. 42.)

Mr. Frederick H. Newell, Director of the Reclamation Service, stated (transcript, p. 45):

"We are now fully aware that the ultimate development of the city of San Francisco will require the use of this reservoir site."

Col. Biddle, president of the Army Board of Engineers, gives as his conclusions (transcript, p. 64):

"There is no question in my mind that the Hetch Hetchy is the best water supply for San Francisco, and that it is the most economical that can be obtained; it can be obtained more promptly, and is better in every way."

Gifford Pinchot, whose familiarity with the conservation policy of the Government is well known, stated his views as follows (transcript, p. 25):

"The fundamental principle of the whole conservation policy is that of use, to take every part of the land and its resources and put it to that use in which it will best serve the most people, and I think there can be no question at all but in this case we have an instance in which all weighty considerations demand the passage of the bill."

The development of the Hetch Hetchy project in the manner now proposed represents the highest beneficial use to which this magnificent dam site could be put. The domestic needs of more than 700,000 people, a population which Prof. Marx, of Stanford University, estimates will be 3,000,000 by the end of the century, will be served with pure cold water. The irrigation needs of all that part of San Joaquin Valley which is reasonably tributary to the Tuolumne will be adequately protected for all time. A comparatively inaccessible portion of the beautiful Yosemite Park will be made easy of access to the nature-loving public. The largest possible amount of hydroelectric power is to be developed and distributed to the parties directly interested, making possible a higher development of agricultural and municipal resources. The Government will receive a handsome revenue from the annual rentals, which is to be devoted to further improvement of the Yosemite Park. This is indeed true conservation.

The sole uncertainty which has been presented is whether, if every drop of water in the Tuolumne River is conserved, there will not some day be a shortage in water for the needs of portions of the San Joaquin Valley not protected by this bill, and which might by the construction of expensive irrigation works ultimately use it. What the rainfall in California will be during the next hundred years we can not accurately predict. If it is going to prove insufficient for the needs of all the people of the State, then it will have to be pro rated. But, as Mr. O'Shaughnessy pointed out to the House committee in his testimony (transcript, pp. 151, 152), the irrigators have not demonstrated that there is likelihood of shortage, as they have not yet begun to use the natural sites available for storage dams on adjoining rivers, such as the Merced, and much water is annually going to waste.

The objections which have been put forward so earnestly by the opponents to the measure from irrigation sections are objections which go to every single source of supply which has been proposed for San Francisco. They have not been forced upon the committee by citizens and chambers of commerce from sections of the State adjacent to other sources, because San Francisco is not now seeking to use those sources. Let her seriously undertake to use the Mokelumne or the McCloud or any other source except possibly the lower Sacramento, and the cry will come just as loud from the citizens and chambers of commerce of those districts. And with respect to the lower Sacramento it has been already shown that the advance of the tidal stream resultant upon the withdrawal of water for irrigation is going to render that source unfit for drinking purposes within the century, and that the withdrawal of quantities of water for municipal purposes in addition to that needed for irrigation may interfere with navigation.

The question still remains, Is the ever-growing urban population of the bay cities to be deprived of pure water—a real, present, necessity of life—in order that a few acres of arid land far distant from any river may some day receive intensive cultivation? We can not think that true conservation dictates such a policy. Perhaps the only true answer was the suggestion made last fall to Secretary Fisher by an ardent nature lover, that San Francisco might use the waters of the Pacific Ocean, but we trust that Congress is not going to limit the city to that supply.

NEED FOR PRESENT ACTION.

Many attempts have been made by opponents of this measure to delay action until the December session. We submit that nothing can be gained by delay. Every possible objection that can be raised to the acquisition by San Francisco of the Tuolumne supply has been raised during the past 10 years. They are to be found set forth in full in the transcript of the proceedings before Secretaries Ballinger and Fisher and before the House committee at this session. The answer to them is in the report of the board of Army engineers—San Francisco is willing to submit its case on that alone. But San Francisco urges immediate action. Her people need water, and the need grows every year. Her growth is restricted because outlying districts can not be supplied. The Spring Valley Water Co. is not only refusing to make extensions and take on new consumers, but is advertising to its present customers that a water famine is imminent, and that they must use water economically. If action is had now on this bill a whole year will be saved; the city can go to work at once on this project. If action is delayed until December the winter's snows will make it impossible to do any work until next summer. A year's delay may have serious consequences. Nearly 1 per cent of the people of the United States are petitioning this Congress for relief. They trust that their petition will not go unheard.

Respectfully submitted.

PERCY V. LONG,
City Attorney, City and County of San Francisco.

ROBERT M. SEARLS,
Assistant City Attorney.

(Population, 425,000.)

In behalf of our respective municipalities who expect to share with San Francisco in the benefits of the Hetch Hetchy project, we join with the city attorney of San Francisco in the above brief and petition:

Ben C. Woolner, city attorney of Oakland.....	206,000
Redmond C. Staats, city attorney of Berkeley.....	45,000
James A. Ballentine, city attorney of Piedmont.....	2,900
Samuel Poorman, jr., city attorney of Alameda.....	27,000
Charles N. Kirkbride, city attorney of San Mateo.....	5,000
Albert Mansfield, city attorney of Redwood City.....	3,500
John F. Davis, city attorney of Burlingame.....	3,000
Norman E. Malcolm, city attorney of Palo Alto.....	10,000
Frank Mitchell, jr., city attorney of Hayward.....	3,500
J. N. Frank, city attorney of San Leandro.....	3,471

Total population of bay cities..... 734,371







